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=> d l146 bib abs hitrn tot

L146 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:781459 HCAPLUS

DN 135:335173

TI Cyclodextrin polymer compositions as drug carriers

IN Kosak, Kenneth M.

PA USA

SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. 6,048,736.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|----|--|------|----------|-----------------|----------|-----|
| PI | US 2001034333 | A1 | 20011025 | US 2001-775011 | 20010201 | <-- |
| | US 6048736 | A | 20000411 | US 1998-223055 | 19981230 | <-- |
| | WO 2000040962 | A1 | 20000713 | WO 1999-US30820 | 19991227 | <-- |
| | W: AU, BR, CA, CN, IL, IN, JP, MX, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | | |

PRAI US 1998-223055 A2 19981230 <--

WO 1999-US30820 A2 19991227

US 1998-67921 B2 19980429 <--

AB This invention discloses compns. of cyclodextrin polymers for carrying drugs and other active agents. Compns. are also disclosed of cyclodextrin polymer carriers that release drugs under controlled conditions. The invention also discloses compns. of cyclodextrin polymer carriers that are coupled to biorecognition mols. for targeting the delivery of drugs to their site of action. The advantages of the water-sol. cyclodextrin polymer carrier are: drugs can be used based on efficacy without soly. or conjugation requirements; drugs can be delivered as macromols. and released within the cell; drugs can be targeted by coupling the carrier to biorecognition mols.; prepn. methods are independent of the drug to facilitate multiple drug therapies. Thus, a cyclodextrin polymer was

prepd. by the reaction of .beta.-cyclodextrin with 1,4-butanediol diglycidyl ether and 2-aminoanthracene was incorporated into the polymer.

IT 315-30-0, Allopurinol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclodextrin polymer compns. as drug carriers)

L146 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:754456 HCAPLUS

DN 133:306344

TI Targeted mutagenesis in living cells using modified
oligonucleotides

IN Meyer, Rich B., Jr.; Gamper, Howard B.; Kuttyavin, Igor V.; Gall,
Alexander A.

PA Epoch Pharmaceuticals, Inc., USA

SO U.S., 19 pp., Cont.-in-part of U.S. 5,849,482.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | US 6136601 | A | 20001024 | US 1997-827117 | 19970326 |
| | US 5849482 | A | 19981215 | US 1995-485611 | 19950607 <-- |
| PRAI | US 1991-748138 | B1 | 19910821 | | |
| | US 1994-178733 | B2 | 19940107 | | |
| | US 1995-485611 | A2 | 19950607 | | |
| | US 1988-250474 | B2 | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | | |
| | US 1993-11482 | B2 | 19930126 | | |
| | US 1993-49807 | B1 | 19930420 | | |
| | US 1994-226949 | A2 | 19940627 | | |
| | US 1994-334490 | A | 19941104 | | |

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby **nucleotide** in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are also disclosed.

IT 237059-49-3D, **oligonucleotides** contg.

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified
oligonucleotides)

RE.CNT 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:238403 HCAPLUS

DN 132:270079

TI Cyclodextrin polymers for carrying and releasing drugs

IN Kosak, Kenneth M.

PA USA

SO U.S., 19 pp., Cont.-in-part of U. S. Ser. No. 67,921, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

PI US 6048736 A 20000411 US 1998-223055 19981230 <--
WO 2000040962 A1 20000713 WO 1999-US30820 19991227 <--
W: AU, BR, CA, CN, IL, IN, JP, MX, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE
EP 1183538 A1 20020306 EP 1999-970862 19991227 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
US 2001034333 A1 20011025 US 2001-775011 20010201 <--
US 2001021703 A1 20010913 US 2001-829551 20010410 <--
PRAI US 1998-67921 B2 19980429 <--
US 1998-223055 A 19981230 <--
WO 1999-US30820 W 19991227

AB This invention discloses methods for prepg. compns. of cyclodextrin polymers for carrying drugs and other active agents. Methods are also disclosed for prepg. cyclodextrin polymer carriers that release drugs under controlled conditions. The invention also discloses methods for prepg. compns. of cyclodextrin polymer carriers that are coupled to biorecognition mols. for targeting the delivery of drugs to their site of action. The advantages of the water sol. (or colloidal) cyclodextrin polymer carrier are: (1) drugs can be used that are designed for efficacy without conjugation requirements, (2) it will allow the use of drugs designed solely for efficacy without regard for soly., (3) unmodified drugs can be delivered as macromols. and released within the cell, (4) drugs can be targeted by coupling the carrier to biorecognition mols., (5) synthesis methods are independent of the drug to facilitate multiple drug therapies. .beta.-Cyclodextrin was **crosslinked** while complexed with anthracene at a molar ratio of 4:1. Chloroform extn. did not remove the anthracene, since it was completely entrapped within the cyclodextrin.

IT 315-30-0, Allopurinol

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclodextrin polymers for carrying and releasing drugs)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:659532 HCAPLUS

DN 131:296189

TI **Oligonucleotides** containing pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination

IN Meyer, Rich B., Jr.; Afonina, Irina A.; Kutyavin, Igor V.

PA Epoch Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|--------------|-----------------|--------------|
| PI | WO 9951775 | A1 | 19991014 | WO 1999-US7492 | 19990405 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6127121 | A | 20001003 | US 1998-54830 | 19980403 |
| | CA 2327547 | AA | 19991014 | CA 1999-2327547 | 19990405 <-- |
| | AU 9934724 | A1 | 19991025 | AU 1999-34724 | 19990405 <-- |
| | EP 1068358 | A1 | 20010117 | EP 1999-916394 | 19990405 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | JP 2002510507 | T2 | 20020409 | JP 2000-542486 | 19990405 <-- |
| PRAI | US 1998-54830 | A | 19980403 <-- | | |
| | WO 1999-US7492 | W | 19990405 | | |

AB **Oligonucleotides** in which one or more purine residues are substituted by pyrazolo[3,4-d]pyrimidines exhibit improved hybridization properties. **Oligonucleotides** contg. pyrazolo[3,4-d]pyrimidine base analogs have higher melting temps. than unsubstituted **oligonucleotides** of identical sequence. Thus, in assays involving hybridization of an **oligonucleotide** probe to a target **polynucleotide** sequence, higher signals are obtained. In addn., mismatch discrimination is enhanced when pyrazolo[3,4-d]pyrimidine-contg. **oligonucleotides** are used as hybridization probes, making them useful as probes and primers for hybridization, amplification and sequencing procedures, particularly those in which single- or multiple-**nucleotide** mismatch discrimination is required.

IT 271-80-7D, 1H-Pyrazolo[3,4-d]pyrimidine, derivs. 315-30-0
2380-63-4, 1H-Pyrazolo[3,4-d]pyrimidin-4-amine 2537-04-4
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)

(**oligonucleotides** contg. pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:659404 HCAPLUS

DN 131:282379

TI Hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders

IN Hedgpeth, Joel; Afonina, Irina A.; Kutayavin, Igor V.; Lukhtanov, Eugeny A.; Belousov, Evgeniy S.; Meyer, Rich B., Jr.

PA Epoch Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|--------------|-----------------|--------------|
| PI | WO 9951621 | A2 | 19991014 | WO 1999-US7487 | 19990405 <-- |
| | WO 9951621 | A3 | 20011108 | | |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6312894 | B1 | 20011106 | US 1998-54832 | 19980403 <-- |
| | CA 2329135 | AA | 19991014 | CA 1999-2329135 | 19990405 <-- |
| | AU 9934721 | A1 | 19991025 | AU 1999-34721 | 19990405 <-- |
| | EP 1144429 | A2 | 20011017 | EP 1999-916391 | 19990405 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| PRAI | US 1998-54832 | A | 19980403 <-- | | |
| | US 1995-415370 | A2 | 19950403 <-- | | |
| | WO 1999-US7487 | W | 19990405 | | |

AB Conjugates between a minor groove binding mol., such as the trimer of 1,2-dihydro-(3 H)-pyrrolo[3,2-e]indole-7-carboxylate (CDPI3), and an **oligonucleotide** form unusually stable hybrids with complementary target sequences, in which the tethered CDPI3 group resides in the minor groove of the duplex. These conjugates can be used as probes and primers. Due to their unusually high binding affinity, conjugates as short as 8-mers can be used as amplification primers with high specificity and efficiency. Minor groove binder (MGB) conjugation also increases the discriminatory power of short **oligonucleotides**, providing enhanced detection of **nucleotide** sequence mismatches by short **oligonucleotides**. The MGB-conjugated probes and primers described herein facilitate various analytic and diagnostic procedures, such as amplification reactions, PCR, detection of single-**nucleotide**

polymorphisms, gene hunting, differential display, **fluorescence** energy transfer, hydrolyzable probe assays and others; by allowing the use of shorter **oligonucleotides**, which have higher specificity and better discriminatory power.

IT 2380-63-4, 4-Amino-1H-pyrazolo[3,4-d]pyrimidine 2465-59-0
2537-04-4

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)
(**oligonucleotides** conjugates contg.; hybridization and
mismatch discrimination using **oligonucleotides** conjugated to
minor groove binders)

L146 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:505631 HCAPLUS

DN 131:154471

TI Targeted mutagenesis in living cells using modified
oligonucleotides

IN Meyer, Rich B., Jr.; Gamper, Howard B.; Kutyavin, Igor V.; Gall,
Alexander A.

PA Epoch Pharmaceuticals, Inc., USA

SO U.S., 20 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | US 5935830 | A | 19990810 | US 1997-827116 | 19970326 |
| | US 5849482 | A | 19981215 | US 1995-485611 | 19950607 <-- |
| | CA 2223584 | AA | 19961219 | CA 1996-2223584 | 19960607 |
| PRAI | US 1995-485611 | A2 | 19950607 | | |
| | US 1988-250474 | B2 | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | | |
| | US 1991-748138 | B1 | 19910821 | | |
| | US 1993-11482 | B2 | 19930126 | | |
| | US 1993-49807 | B1 | 19930420 | | |
| | US 1994-178733 | B2 | 19940107 | | |
| | US 1994-226949 | A2 | 19940627 | | |
| | US 1994-334490 | A | 19941104 | | |

AB A method for introducing a site-specific mutation into a target
polynucleotide sequence is presented. The method involves the use
of an **oligonucleotide** capable of binding to the target sequence,
either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or
equiv. base pairing) or by Watson/Crick base pairing (in the presence of a
recombinase enzyme). The **oligonucleotide** of the invention is
modified by the covalent attachment of one or more electrophilic groups.
When a modified **oligonucleotide** is bound to its target sequence,
the electrophilic group is able to interact with a nearby
nucleotide in the target sequence, causing a modification to the
nucleotide that results in a change in **nucleotide**
sequence. Compns. used in the practice of the method are disclosed. Also
disclosed are arm-leaving group structure having the formula -A-L such as
(CH₂)_qY(CH₂)_mL, (CH₂)_qNHCO(CH₂)_m(X)_n'N(R₁)(CH₂)_pL, or
(CH₂)_q'O(CH₂)_q'NHCO(CH₂)_m(X)_n'N(R₁)(CH₂)_pL (q=0-8, q'=1-7; Y=NH₂, OH, SH,
COOH, C.ident.CH; X= (Cl, Br, lower alkyl, lower alkoxy-substituted) Ph;
n'=0, 1; p= 1-6; R₁=H, lower alkyl, or (CH₂)_pL; L=Cl, Br, I, SO₂R₂, S+R₃;
R₃,R₄=Cl-6 alkyl, aryl, heteroaryl, or R₃ and R₄ form a Cl-6-alkylene
bridge).

IT 237059-49-3D, **oligonucleotides** contg.

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified
oligonucleotides)

RE.CNT 155 THERE ARE 155 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L146 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:612101 HCAPLUS

DN 129:239906

TI DNA glycosylase inhibitors and their therapeutic uses

IN Verdine, Gregory L.; Deng, Li

PA President and Fellows of Harvard College, USA

SO PCT Int. Appl., 78 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|--------------|-----------------|--------------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 9839334 | A1 | 19980911 | WO 1998-US4604 | 19980309 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6369237 | B1 | 20020409 | US 1997-812653 | 19970307 |
| | AU 9867587 | A1 | 19980922 | AU 1998-67587 | 19980309 <-- |
| PRAI | US 1997-812653 | A | 19970307 <-- | | |
| | WO 1998-US4604 | W | 19980309 <-- | | |
| OS | MARPAT 129:239906 | | | | |
| AB | The present invention pertains to novel inhibitors of DNA glycosylases. The invention is based at least in part on the observation that specific substituted pyrrolidines, and analogs thereof, are capable of specifically inhibiting DNA glycosylases, e.g., as transition state analogs, and consequently are useful for modulation of DNA repair. A stereoselective, general, and practical synthetic route is developed for these inhibitors. An adenine-contg. inhibitor binds adenine glycosylase MutY specifically in a strength that surpassed the best inhibitor previously reported for any glycosylase. Such compds. can, for example, be used for treating subjects having a disorder assocd. with excessive cell proliferation, such as in the treatment of various cancers. Furthermore, these glycosylase inhibitors can be used as antibacterial, antiviral, and antifungal agents. | | | | |
| IT | 271-80-7DP , 1H-Pyrazolo[3,4-d]pyrimidine, nucleotide derivs. contg. 315-30-ODP , nucleotide derivs. contg. RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (DNA glycosylase inhibitors and their therapeutic uses) | | | | |

L146 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:550433 HCAPLUS

DN 129:185075

TI Targeted modification of the ccr-5 gene with **crosslinking** triplex-forming **oligonucleotides**

IN Meyer, Rich B., Jr.; Kutyaev, Igor V.

PA Epoch Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|--------------|-----------------|--------------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 9834945 | A1 | 19980813 | WO 1998-US2314 | 19980206 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | AU 9862715 | A1 | 19980826 | AU 1998-62715 | 19980206 <-- |
| PRAI | US 1997-37464P | P | 19970206 <-- | | |
| | US 1998-19387 | A | 19980205 <-- | | |
| | WO 1998-US2314 | W | 19980206 <-- | | |

AB Claimed here are **oligonucleotides** capable of forming triple-stranded complexes with the CCR-5 chemokine receptor gene, complexing with it via **crosslinking**. The **oligonucleotides** bear alkylating **crosslinking** groups, capable of causing targeted modification of the CCR-5 gene. Such modifications can impair the ability of the CCR-5 gene product to serve as a co-receptor for human immunodeficiency viruses.

IT 2537-04-4

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(ppG modified base; targeted modification of ccr-5 gene with **crosslinking** triplex-forming **oligonucleotides**)

L146 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:148844 HCAPLUS

DN 126:153646

TI **Oligonucleotide** derivs. preparation for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy

IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.; **Petrie, Charles R.**; **Tabone, John C.**; **Hurst, Gerald D.**

PA Microprobe Corporation, USA

SO PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|--------------|
| PI | WO 9640711 | A1 | 19961219 | WO 1996-US9551 | 19960607 |
| | W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG | | | | |
| | RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | US 5849482 | A | 19981215 | US 1995-485611 | 19950607 <-- |
| | CA 2223584 | AA | 19961219 | CA 1996-2223584 | 19960607 |
| | AU 9661035 | A1 | 19961230 | AU 1996-61035 | 19960607 |
| | AU 709924 | B2 | 19990909 | | |
| | EP 842186 | A1 | 19980520 | EP 1996-918350 | 19960607 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | JP 11509528 | T2 | 19990824 | JP 1996-501849 | 19960607 |
| PRAI | US 1995-485611 | A | 19950607 | | |
| | US 1988-250474 | B2 | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | | |
| | US 1991-748138 | B1 | 19910821 | | |
| | US 1993-11482 | B2 | 19930126 | | |
| | US 1993-49807 | B1 | 19930420 | | |
| | US 1994-178733 | B2 | 19940107 | | |
| | US 1994-226949 | A2 | 19940627 | | |
| | US 1994-334490 | A | 19941104 | | |
| | WO 1996-US9551 | W | 19960607 | | |

AB **Oligonucleotide** derivs. (ODNs) include a sequence that is complementary to a target sequence in single-stranded RNA, or single- or double-stranded DNA, and an alkylating function which after hybridization alkylates the target sequence. ODNs adapted for alkylating single-stranded RNA, such as mRNA, are complementary to the target sequence in the Watson Crick sense. ODNs adapted for alkylating double-stranded DNA have at least two alkylating functions and are

complementary to the target sequence in the Hoogsteen or reverse Hoogsteen sense. With these ODNs both strands of the target sequence are alkylated. A third class of ODNs have at least approx. 26 **nucleotide** units in a continuous sequence which are complementary to the target sequence of double-stranded DNA, and the alkylating function is covalently attached to a **nucleotide** unit in the continuous sequence. Alkylation or **crosslinking** with this class of ODNs occurs in the presence of a recombinase enzyme.

IT 129357-70-6P 129357-75-1P 129357-76-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

IT 137823-47-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn.; **oligonucleotide** derivs. prepn. for target **nucleic** acid alkylation and **crosslinking**, gene mapping, and gene therapy)

L146 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1990:532717 HCAPLUS

DN 113:132717

TI Preparation of pyrazolo[3,4-d]pyrimidine derivatives as intermediates for diagnostic **oligonucleotides**

IN **Petrie, Charles R.; Meyer, Rich B.**

PA Microprobe Corp., USA

SO PCT Int. Appl., 41 pp.

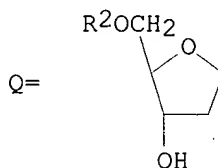
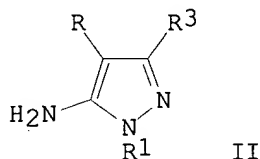
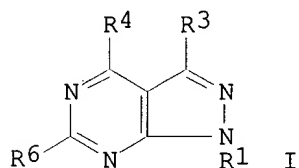
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|--------------|
| PI | WO 9003370 | A1 | 19900405 | WO 1989-US4184 | 19890926 <-- |
| | W: JP | | | | |
| | RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| | CA 1338379 | A1 | 19960611 | CA 1989-613651 | 19890927 <-- |
| | US 5824796 | A | 19981020 | US 1994-334490 | 19941104 <-- |
| PRAI | US 1988-250474 | A | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | | |
| | US 1993-49807 | B1 | 19930420 | | |
| OS | MARPAT 113:132717 | | | | |
| GI | | | | | |



AB The title compds. [I; R1 = H, sugar moiety optionally substituted at its 3' or 5' position with mono-, di-, or triphosphate or a reactive **group** suitable for **nucleotide** bond formation; provided that when R3 = H, R1 .noteq. H; R3 = H, W(X)nA; W, X = chem. linker arm; A = intercalator, electrophilic **crosslinker**, **reporter group**; R4, R6 = H, OH, SH, alkylthio, NH2, NH(CH2)tNH2; n = 0,1; t = 0-12] were prepd. by (1) reaction of 5-aminopyrazole-4-carbonitriles (II; R = cyano; R1, R3 = as above) with a dialkoxymethyl carboxylate

followed by reaction with NH_3 to give I ($\text{R}_4 = \text{NH}_2$), (2) reaction of II ($\text{R} = \text{CONH}_2$; $\text{R}_1, \text{R}_3 =$ as above) with a dialkoxymethyl carboxylate to give I ($\text{R}_4 = \text{OH}$), or (3) reaction of II ($\text{R} = \text{cyano}, \text{CONH}_2$; $\text{R}_1, \text{R}_3 =$ as above) with an alkyl xanthate salt followed by an alkyl halide and oxidn. An **oligonucleotide** sequence contg. .gtoreq.1 of **labeled** I ($\text{R}_1 =$ sugar moiety as described above), particularly **labeled** with biotin, is used as DNA hybridization probe and as a kit for identifying target DNA sequence comprising the above **labeled oligonucleotide** complementary to the target DNA, a denaturation reagent, and a hybridization reaction mixt. (no data). Thus, 5-amino-1-(2-deoxy-3,5-di-O-toluoyl-.beta.-D-erythropentofuranosyl)-3-[(5-tritylamino)pentyl]pyrazole-4-carbonitrile was heated 5 h at 80-90.degree. with $\text{AcOCH}_2(\text{OEt})_2$ and the intermediate syrup was treated 2 days at room temp. with methanolic NH_3 to give 77% I [$\text{R}_1 = \text{Q}, \text{R}_2 = \text{R}_6 = \text{H}, \text{R}_3 = (\text{CH}_2)_5\text{NHCPH}_3, \text{R}_4 = \text{NH}_2$]. This was phosphorylated by reaction with POCl_3 in $(\text{MeO})_3\text{PO}$ followed by hydrolysis with 0.1 M NH_4HCO_3 to give I [$\text{R}_1 = \text{Q}, \text{R}_2 = (\text{HO})_2\text{P}(\text{O}), \text{R}_3 = (\text{CH}_2)_5\text{NHCPH}_3, \text{R}_4 = \text{NH}_2, \text{R}_6 = \text{H}$] which was hydrogenolyzed over $\text{Pd}(\text{OH})_2/\text{C}$ in cyclohexadiene and then acylated with N-hydroxysuccinimidyl 6-biotinamidocaproate in DMF contg. Et₃N to give I [$\text{R}_1 = \text{Q}, \text{R}_2 = (\text{HO})_2\text{P}(\text{O}), \text{R}_3 = 5-[(6\text{-biotinamido})\text{hexamido}]\text{pentyl}, \text{R}_4 = \text{NH}_2, \text{R}_6 = \text{H}$].

IT 129357-75-1P 129357-76-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction of, in prepn. of biotin-**labeled** deoxyribofuranosylpyrazolopyrimidine **nucleotide**)

IT 129357-70-6P 129357-71-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as intermediate for **oligonucleotide** hybridization probes)

L146 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:173656 HCAPLUS

DN 110:173656

TI Synthesis and cytotoxic activity of 4,6-diaminopyrazolo[3,4-d]pyrimidine riboside and its 3-carbamoyl derivative

AU Garaeva, L. D.; Korbukh, I. A.; Dobrynin, Ya. V.; Nikolaeva, T. G.; Preobrazhenskaya, M. N.

CS VONTs, Moscow, USSR

SO Khim.-Farm. Zh. (1988), 22(7), 798-802

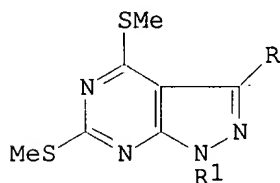
CODEN: KHFZAN; ISSN: 0023-1134

DT Journal

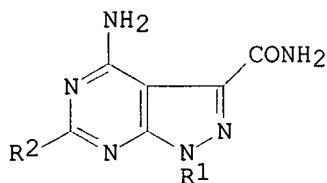
LA Russian

OS CASREACT 110:173656

GI



I



II

AB Treating **nucleoside** I ($\text{R} = \text{CN}, \text{R}_1 = .\text{beta.-D-ribofuranosyl}$) with aq. NH_3 and H_2O_2 gave 76% I ($\text{R} = \text{CONH}_2$) which underwent amination by methanolic NH_3 in an ampul to give 70% amino deriv. II ($\text{R}_2 = \text{MeS}$) whose oxidn. by $m\text{-ClC}_6\text{H}_4\text{C}(\text{O})\text{OOH}$ gave 90% sulfone II ($\text{R}_2 = \text{MeSO}_2$). Treatment of the latter with $\text{NH}_3(1)$ in an ampul eliminated the methylsulfonyl group to give 70% diamino deriv. II ($\text{R}_2 = \text{NH}_2$). The most cytotoxic of the groups were the 4,6-bis(methylmercapto)- and **diaminonucleosides** contg.

a carbamoyl group.
IT **119952-34-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amination of)
IT **70421-30-6P 116019-28-4P 119952-37-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and cytotoxic activity of)
IT **69259-11-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and oxidative ammonolysis of)
IT **74525-93-2P 119952-35-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and oxidn. to sulfone)
IT **73236-32-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1988:132231 HCAPLUS

DN 108:132231

TI A new method for synthesizing **acyclonucleosides**

AU Lazrek, H. B.; Taha, M. L.; Barascut, J. L.; Imbach, J. L.

CS Dep. Chim., Fac. Sci., Marrakech, Morocco

SO Nucleosides Nucleotides (1987), 6(1-2), 379-80

CODEN: NUNUD5; ISSN: 0732-8311

DT Journal

LA English

AB A **report** from the 7th round table symposium held in 1986. A new series of **acyclonucleoside** analogs of allopurinol, where the ribose moiety is replaced by the (2-hydroxyethoxy)methyl **group** was prepd. using phase-transfer catalysis.

IT **315-30-0DP**, Allopurinol, **acyclonucleoside** analogs

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1987:214304 HCAPLUS

DN 106:214304

TI **Labeled (poly)nucleotides**

IN Sugimoto, Nobutaka; Sato, Toyoki

PA Yuki Gosei Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------------|------|----------|-----------------|--------------|
| PI | JP 61109797 | A2 | 19860528 | JP 1984-231847 | 19841101 <-- |
| OS | CASREACT 106:214304 | | | | |
| GI | | | | | |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Purine base residues I (R, R1 = H, OH, NH2; X, X1, X2 = C, N; R2 = **fluorescence labeled** compds. (except 7-deazapurine) linked to (poly)**ribonucleotides** and (poly)**deoxyribonucleotides**, useful for identification and extn. of target genes (no data), were prepd. Thus, malononitrile was treated with hydrazine to give 3-(cyanomethyl)-4-cyano-5-aminopyrazole.

Cyclocondensation of this with HCHO and Raney Ni redn. of the resulting 4-amino-3-(cyanomethyl)pyrazolo[3,4-d]pyrimidine gave a purine analog II (R = H). Glycosidation of protected II (R = Ac) with 3,5-di-O-acetyl-.beta.-D-deoxyribosyl chloride gave, after deacetylation, a **nucleoside** III. Then a nucleoside deriv. IV (a deriv. of III) was condensed with C-C-T (C = cytosine; T = thymine) to give, after deprotection, Q-C-C-T-Q-C-C-T-Q-C-C-T-T (Z = **nucleotide** whose base residue after deprotection is II) (V). Then I was fluorescence-labeled by dansyl chloride in acetone.

IT 38340-27-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and Raney Nickel redn. of)

IT 107296-14-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and benzylation, dimethoxytritylation, and phosphorylation of)

IT 46153-15-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and protection of)

L146 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1986:221087 HCAPLUS

DN 104:221087

TI Specificity of adenine binding to lima bean lectin

AU Roberts, David D.; Arjunan, Palanisamy; Townsend, Leroy B.; Goldstein, Irwin J.

CS Dep. Biol. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA

SO Phytochemistry (1986), 25(3), 589-93

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA English

AB The interactions between lima bean lectin (LBL) and adenine were examd. using a series of synthetic purine analogs. Binding was sensitive to modification at most positions of the purine ring, suggesting a high degree of specificity for adenine binding. Methylation of the 6 NH2-group to MeNH-, Me2N- and Me3N+-analogs progressively decreased the binding affinity. Compds. lacking the 6 NH2-group were not bound. Methylation of adenine at N1, N3 or N7 also inhibited binding, indicating specific interactions with these ring nitrogens. In contrast to the previous report that N9-substituted adenines, **nucleosides** and **nucleotides** were not bound (Roberts, D. D., et al., 1983), 9-methyl- and 9-benzyl-substituted adenines were bound to LBL with high affinity. Substitutions at C-2 and C-8 were tolerated and, in some cases, increased the affinity of binding to LBL. Heterotropic interactions between the adenine and 1,8-anilidonaphthalenesulfonate binding sites were also sensitive to modification of the purine ring. 2-Methylthioadenine and 4-aminopyrazolo[3,4-d]pyrimidine showed increased allosteric interaction with 1,8-anilidonaphthalenesulfonate binding, whereas several adenine analogs with a 9-p-nitrobenzyl substituent appeared to be neg. effectors of 1,8-anilidonaphthalenesulfonate binding.

IT 2380-63-4 6826-96-6

RL: BIOL (Biological study)
(lima bean lectin binding by)

L146 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1985:437693 HCAPLUS

DN 103:37693

TI Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine **ribonucleosides**

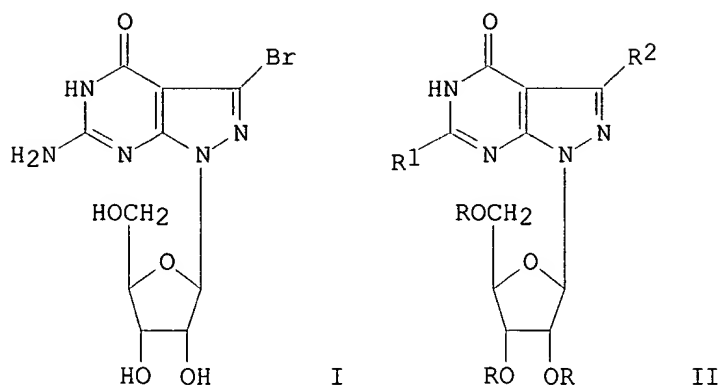
AU Petrie, Charles R., III; Cottam, Howard B.; McKernan, Patricia A.; Robins, Roland K.; Revankar, Ganapathi R.

CS Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA

SO J. Med. Chem. (1985), 28(8), 1010-16

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal
 LA English
 OS CASREACT 103:37693
 GI



AB High-temp. glycosylation of 3,6-dibromoallopurinol with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose in the presence of $\text{BF}_3 \cdot \text{OEt}_2$, followed by ammonolysis, provided **nucleoside I**. Similar glycosylation of either 3-bromo-4(5H)-oxypyrazolo[3,4-d]pyrimidin-6-yl Me sulfoxide or 6-amino-3-bromopyrazolo[3,4-d]pyrimidin-4(5H)-one, and subsequent ammonolysis, also gave I. Application of this glycosylation procedure to 6-(methylthio)-4(5H)-oxypyrazolo[3,4-d]pyrimidine-3-carboxamide gave the corresponding N-1 glycosyl deriv. II ($\text{R} = \text{Bz}$, $\text{R}_1 = \text{SMe}$, $\text{R}_2 = \text{CONH}_2$) (III). Dethiation and debenzoylation of III provided an alternate route to the recently reported 3-carbamoylallopurinol **ribonucleoside**. Oxidn. of III and subsequent ammonolysis afforded 6-amino-1-beta.-D-ribofuranosyl-4(5H)-oxypyrazolo[3,4-d]pyrimidine-3-carboxamide (IV) which on alk. treatment gave 6-azacadeguomycin II ($\text{R} = \text{H}$, $\text{R}_1 = \text{NH}_2$, $\text{R}_2 = \text{CO}_2\text{H}$). Acetylation of IV, followed by dehydration with phosgene, provided the versatile intermediate II ($\text{R} = \text{Ac}$, $\text{R}_1 = \text{NH}_2$, $\text{R}_2 = \text{cyano}$) (V). Deacetylation of V gave 6-amino-1-beta.-D-ribofuranosyl-4(5H)-oxypyrazolo[3,4-d]pyrimidine-3-carbonitrile. Reaction of V with H_2S gave II ($\text{R} = \text{H}$, $\text{R}_1 = \text{NH}_2$, $\text{R}_2 = \text{CSNH}_2$). All of these compds. were tested in vitro against certain viruses and tumor cells. Among these compds., the guanosine analogs I and II ($\text{R} = \text{H}$, $\text{R}_1 = \text{NH}_2$, $\text{R}_2 = \text{cyano}$) showed significant activity against measles in vitro and exhibited moderate antitumor activity in vitro against L1210 and P388 leukemia. 6-Azacadeguomycin and all other compds. were inactive against the viruses and tumor cells tested in vitro.

IT 5334-26-9 24521-76-4

RL: RCT (Reactant)
 (bromination of)

IT 96555-44-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and acetylation of)

IT 96555-41-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and deblocking of)

IT 96555-37-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and debromination of)

IT 96555-45-2P

- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dehydration of)
- IT **96555-46-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and desulfuration or oxidn. of)
- IT **96555-42-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and methylation of)
- IT **96575-36-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)
- IT **96555-43-0P 96575-35-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and ribosylation of)
- IT **85426-74-0P 90914-46-8P 96555-38-3P**
96555-48-5P 96555-49-6P 96555-50-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1984:491391 HCAPLUS

DN 101:91391

TI Synthesis and biological activity of certain 3,4-disubstituted
pyrazolo[3,4-d]pyrimidine **nucleosides**

AU Cottam, Howard B.; **Petrie, Charles R.**; McKernan, Patricia A.;
Goebel, Richard J.; Dalley, N. Kent; Davidson, Richard B.; Robins, Roland
K.; Revankar, Ganapathi R.

CS Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA

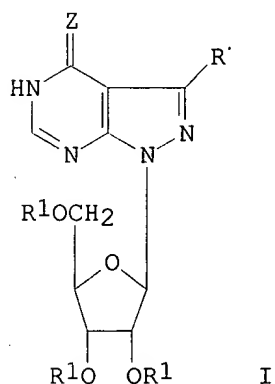
SO J. Med. Chem. (1984), 27(9), 1119-27

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

GI



- AB Several title **ribonucleosides**, e.g., I [R = Br, cyano, SMe, NH₂, NHMe, NMe₂, CONH₂, CSNH₂, C(:NH)NH₂, C(:NOH)NH₂; R₁ = H, Bz; Z = O, S], were prepd. I (R = Br, cyano; R₁ = Bz; Z = O), obtained by glycosylation of the corresponding heterocycles with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose, were the key intermediates. The structural assignment of I (R = cyano, R₁ = H, Z = O) was made by single crystal x-ray anal. All the compds. were tested in vitro against certain viruses, tumor cells, and the parasite *Leishmania tropica*. I [R = CSNH₂, C(:NH)NH₂; R₁ = H; Z = O] showed significant activity against Para 3 virus and were potent inhibitors of growth of L1210 and P388 leukemia. I (R = cyano, R₁ = H, Z = S) showed the most significant broad-spectrum antiviral and antitumor

activity. I (R = Br, R1 = H, Z = O) was more active than allopurinol riboside against *L. tropica* within human macrophages.

IT 90914-42-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amination of, with ammonia)

IT 90914-37-7P 90914-43-5P 90914-51-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debenzoylation of)

IT 90914-31-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and debromination of)

IT 90914-32-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and desulfuration of)

IT 90914-30-0P 90914-33-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT 16220-07-8P 90914-34-4P 90914-36-6P

90914-38-8P 90914-39-9P 90914-40-2P

90914-44-6P 90914-46-8P 90914-47-9P

90914-48-0P 90914-49-1P 90914-50-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 90914-52-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, attempted)

IT 5387-84-8 54738-73-7 83255-86-1

RL: RCT (Reactant)
(ribofuranosylation of)

L146 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1982:7014 HCAPLUS

DN 96:7014

TI The **nucleosides** of substituted pyrazolo(3,4-d)pyrimidines

AU Korbukh, I. A.; Bulych, Yu. N.; Yakunina, N. G.; Preobrazhenskaya, M. N.

CS All-Union Cancer Res. Cent., Moscow, 115478, USSR

SO Nucleic Acids Symp. Ser. (1981), 9, 73-5

CODEN: NACSD8

DT Journal

LA English

AB The 1-.beta.-D-ribosides of 4-, 3,4-, 4,6- and 3,4,6-substituted pyrazolo[3,4-d]pyrimidines were prepd. by regioselective glycosylation and subsequent transformations.

IT 5418-10-0 6288-89-7 73236-31-4

78710-14-2 80117-79-9

RL: RCT (Reactant)
(glycosylation of, with ribofuranose tetraacetate)

IT 60355-66-0P 73236-32-5P 76690-43-2P

78710-16-4P 80117-80-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deacetylation of)

IT 60355-67-1P 69259-11-6P 74525-92-1P

78710-19-7P 80117-81-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactions of)

IT 60355-67-1P 69259-11-6P 74516-76-0P

74516-77-1P 74516-78-2P 74516-79-3P

74516-80-6P 74516-81-7P 74516-82-8P

74516-84-0P 74525-92-1P 74525-93-2P

74525-95-4P 76690-46-5P 78710-19-7P

78710-20-0P 78710-21-1P 78710-22-2P

78710-23-3P 80117-82-4P 80117-83-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

L146 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1981:620260 HCAPLUS

DN 95:220260

TI Synthesis of certain **fluorescent** tricyclic **nucleosides** derived from pyrazolo[3,4-d]pyrimidine **nucleosides**

AU Bhat, Ganapati A.; Townsend, Leroy B.

CS Dep. Med. Chem., Univ. Michigan, Ann Arbor, MI, 48109, USA

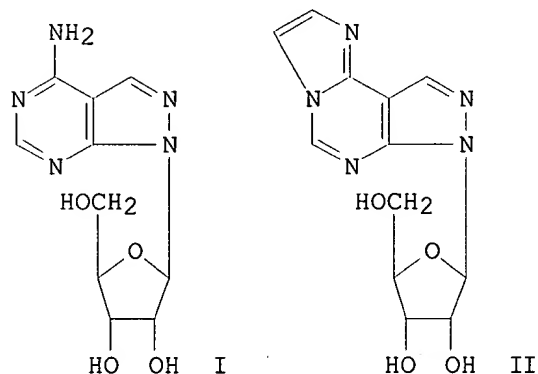
SO J. Chem. Soc., Perkin Trans. 1 (1981), (9), 2387-93

CODEN: JCPRB4; ISSN: 0300-922X

DT Journal

LA English

GI



AB The prepn. is described of tricyclic **nucleosides** with a dihydroimidazole, imidazole, triazole, or tetrazole ring fused to the pyrazolopyrimidine ring system in an angular position. E.g., cyclocondensation reaction of the **nucleoside** I with ClCH₂CHO (H₂O, NaOAc, pH 4.5, 80.degree., 3 h) gave the imidazo deriv. II (64%). The UV and **fluorescence** spectra of the tricyclic **nucleosides** are reported.

IT 64372-76-5

RL: PROC (Process)

(cyclization and acetalization of)

IT 3258-05-7

RL: RCT (Reactant)

(cycloamination reactions of, tricyclic **nucleosides** by)

L146 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1981:525862 HCAPLUS

DN 95:125862

TI Pyrazolopyrimidine **nucleosides**. 12. Synthesis and biological activity of certain pyrazolo[3,4-d]pyrimidine **nucleosides** related to adenosine

AU Bhat, Ganapati A.; Montero, Jean Louis G.; Panzica, Raymond P.; Wotring, Linda L.; Townsend, Leroy B.

CS Coll. Pharm., Univ. Michigan, Ann Arbor, MI, 48109, USA

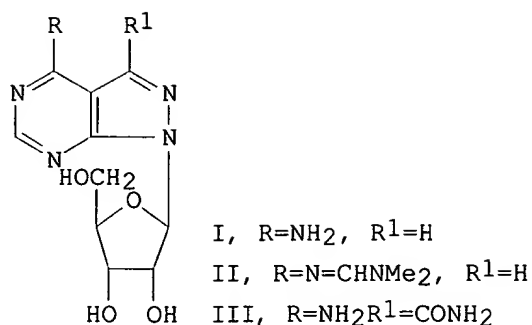
SO J. Med. Chem. (1981), 24(10), 1165-72

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

GI



AB Twenty-six title compds., 13 of which were synthesized, were tested for antitumor activity against mouse L1210 leukemia cells both in vitro and in vivo and against P388 leukemia cells in vivo. I [3258-05-7] and II [78586-44-4] showed the greatest inhibition of growth of L1210 cells in vitro, with the activity of II probably resulting from the formation of I by hydrolysis in the aq. medium. Any alteration of the C4-amino substituent of I resulted in a decrease or loss of antitumor activity. Certain substitutions at the C3 position of I resulted in compds. with a better antitumor activity than I. III [55559-56-3] was the most active compd. giving an increase in life-span of 136% (vs. 48% for I) in L1210-bearing mice and having a significant lethal effect on L1210 cells in vitro.

IT 16220-07-8 54524-71-9 55559-50-7
 55559-51-8 55559-52-9 55559-53-0
 55559-54-1 55559-55-2 55559-56-3
 55559-57-4 64372-72-1 64372-77-6

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antitumor activity of, structure in relation to)

IT 3258-05-7P 60355-67-1P 64372-76-5P

70421-26-0P 78586-40-0DP, derivs. 78586-40-0P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and antitumor activity of, structure in relation to)

IT 64372-69-6

RL: RCT (Reactant)
 (redn. and chlorination of)

L146 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1981:498198 HCAPLUS

DN 95:98198

TI Synthesis of derivatives of pyrazolo[3,4-d]pyrimidin-3-ylacetic acid and their **nucleosides**

AU Bulychiev, Yu. N.; Korbukh, I. A.; Preobrazhenskaya, M. N.

CS Onkol. Nauchn. Tsentr, Moscow, 115478, USSR

SO Khim. Geterotsikl. Soedin. (1981), (4), 536-45

CODEN: KGSSAQ; ISSN: 0453-8234

DT Journal

LA Russian

GI

CODEN: BCPCA6

DT Journal

LA English

AB Anal. of the radioactive species present in hydrolyzates of RNA from intestine of rats after administration of 6-¹⁴C-labeled allopurinol [315-30-0] (50 mg/kg, 2.4 mCi/mmole, i.v.) confirmed the lack of incorporation of allopurinol or its metabolites into **nucleic acids**.

IT 315-30-0

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (metab. of, **nucleic acids** in relation to)

L146 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1975:171339 HCAPLUS

DN 82:171339

TI Pyrazolopyrimidine **nucleosides**. VII. Synthesis of certain pyrazolo[3,4-d]pyrimidine **nucleosides** related to the **nucleoside** antibiotics toyocamycin and sangivamycin

AU Earl, Robert A.; Townsend, Leroy B.

CS Dep. Chem., Univ. Utah, Salt Lake City, Utah, USA

SO J. Heterocycl. Chem. (1974), 11(6), 1033-9

CODEN: JHTCAD

DT Journal

LA English

AB The condensation of 4-acetamido-3-cyanopyrazolo[3,4-d]pyrimidine with 2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl chloride, which evolved copious ams. of HCN, was followed by treatment with NaOMe in MeOH to give Me 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine-3-formimidate monohydrate (I). The formimidate function of I was highly reactive and was readily converted into the corresponding carboxamidine, carboxamidoxime, and carboxamidrazone. Treatment of I with NaHS gave a high yield of the thiocarboxamide, which was then converted into 4-amino-3-cyano-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine. Aq. base transformed I into 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine-3-carboxamide while more vigorous basic hydrolysis gave the corresponding carboxylic acid (II) in nearly quant. yield. Decarboxylation of II in hot sulfolane gave 68% 4-amino-1-(.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidine which established the site of ribosylation and anomeric configuration for all **nucleosides** reported in this investigation.

IT 6826-96-6

RL: RCT (Reactant)
(acetylation of)

IT 55559-50-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reactivity of)

IT 3258-05-7P 55559-51-8P 55559-52-9P

55559-53-0P 55559-54-1P 55559-55-2P

55559-56-3P 55559-57-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L146 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1975:41629 HCAPLUS

DN 82:41629

TI Synthesis of purine **nucleotides** in human and leukemic cells. Interaction of 6-mercaptapurine and allopurinol. 1

AU Wilmanns, W.

CS Dep. Intern. Med. II, Univ. Clin., Tuebingen, Ger.

SO Adv. Exp. Med. Biol. (1974), 41A, 147-58

CODEN: AEMBAP

DT Journal

LA English

AB In a study of the effect of 6-mercaptopurine (I) on the tetrahydrofolate-dependent activation of formate (II)-**14C** in relation to the net de novo synthesis of purine **nucleotides** in cell-free exts. of normal and leukemic leukocytes the incorporation of II-**14C** into **nucleotides** could be detected only if all components necessary for the de novo pathway were added to the incubation mixt. together with the substrates and cofactors of the II-activating system. The purines identified were hypoxanthine and adenine. The activating enzyme, tetrahydrofolate formylase (III), was found in normal and leukemic leukocytes, the highest activities being observed in immature blast cells of acute leukemia. By detn. of the II-**14C** incorporation, a measurable net de novo synthesis of **nucleotides** was detected only in immature leukemic cells. If different patients with acute leukemia were studied, the amt. of II-**14C** incorporation was correlated to the activity of the III. In addn., the rate of II-**14C** incorporation into **nucleotides** depended on the concn. of tetrahydrofolate in the incubation mixt. It could be assumed that the rate of de novo synthesis of **nucleotides** was controlled by the 1st reaction of this pathway (involving phosphoribosylpyrophosphate amidotransferase) and the amt. of N10-formyltetrahydrofolate available for incorporation of activated formyl groups into the C-2 and C-8 positions of the purine ring. Although I in a rather high concn. (1.5 .times. 10⁻³M) had only a small inhibitory effect on III in the leukemic blast cells of patients with acute leukemia, inhibition of III by I was markedly increased by the addn. of allopurinol (IV), whereas IV alone had no effect. This was explained by the fact that IV, by inhibiting xanthine oxidase, reduced the inactivation of I to 6-thiouric acid. Autoradiog. following the chromatog. sepn. of blast-cell hypoxanthine-**14C** and IMP-**14C**, formed by hypoxanthine-guanine phosphoribosyltransferase (V), showed that V was inhibited by I. The I concn. necessary for inhibition of this reaction was about 0.1 of that in the III reaction. As V was also specific for I, the latter was transformed to thioinosinic acid, which was regarded as the metabolically active inhibitor of the de novo synthesis of purine. The addn. of IV affected neither the inhibition of the V by I nor the conversion of I to thioinosinic acid by the same enzyme. It was unlikely that this was due to a lack of xanthine oxidase in the cells investigated. It was concluded that a conversion of I to the **monophosphoribonucleotide** was not necessary for the inhibition of II activation. Only the inhibitory effect of I on this reaction, which was important for the de novo synthesis of **nucleotides**, was potentiated by IV. The competition of both substances with xanthine oxidase was assumed to be the biochem. basis for this interaction. Thus, the inactivation of I by oxidn. to thiouric acid could be prevented by IV. The clin. observation of a higher cytotoxic effect of I treatment, if patients received IV at the same time, was explained by these results.

IT 315-30-0

RL: BIOL (Biological study)
(leukemia response to, purine **nucleotide** formation in, mercaptopurine in relation to)

L146 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1968:417563 HCAPLUS

DN 69:17563

TI Effects of 4-aminopyrazolo(3,4-d)pyrimidine in combination with guanine on **nucleic** acid and protein synthesis by Ehrlich ascites cells in culture. Biochemical and cytochemical analyses

AU Schachtschabel, D. O.; Killander, D.; Zetterberg, A.; McCarthy, R. E.; Foley, G. E.

CS Med. Nobel Inst., Karolinska Inst., Stockholm, Swed.

SO Exp. Cell Res. (1968), 50(1), 73-80

CODEN: ECREAL

DT Journal

LA English
AB Quant. microspectrophotometric and microinterferometric analyses in combination with biochem. methods were used to examine the effects of 4-aminopyrazolo(3,4-d)pyrimidine (I) (5 .times. 10⁻⁶M) in combination with guanine (2 .times. 10⁻⁴M) on the synthesis of DNA, RNA, and protein in asynchronously growing Ehrlich ascites cells in culture. Exposure to such concns. of I + guanine resulted in a nonlethal inhibition of cell multiplication. Pulse **labeling** with thymidine-**14C**, uridine-**14C**, and leucine-**1-14C** in the presence of I + guanine revealed an exponential decline in the per cell rate of DNA synthesis, while the per cell rate of RNA synthesis, as adjudged by uridine-**14C** incorporation, was not significantly inhibited, and the per cell rate of protein synthesis was inhibited only .apprx.50%. Detn. of the cellular content of DNA, RNA, and protein by cytochem. population analyses revealed an accumulation of cells in G1 or early S-phase in I + guanine-treated cultures. These viable, but nondividing cells continued to incorporate uridine-**14C** and leucine-**14C**, but there was no net increase in either RNA or protein per cell; thus continued synthesis must be limited to RNA and protein which is constantly in the process of degradation and resynthesis. I + guanine may exert an inhibitory effect by interference with the synthesis and pool sizes of intracellular purine **nucleotides**.
IT **2380-63-4**
RL: BIOL (Biological study)
(**nucleic** acid and protein formation by carcinoma in response to guanine and)

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:52:04 ON 09 JUL 2002
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DICTIONARY FILE UPDATES: 8 JUL 2002 HIGHEST RN 437701-77-4

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

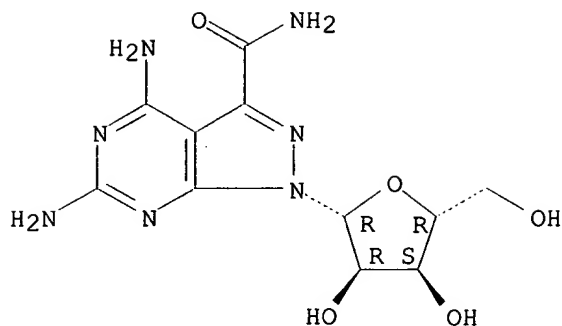
Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d ide can tot 1148

L148 ANSWER 1 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN **119952-37-3** REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,6-diamino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H15 N7 O5
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 2 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 119952-35-1 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4-amino-6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

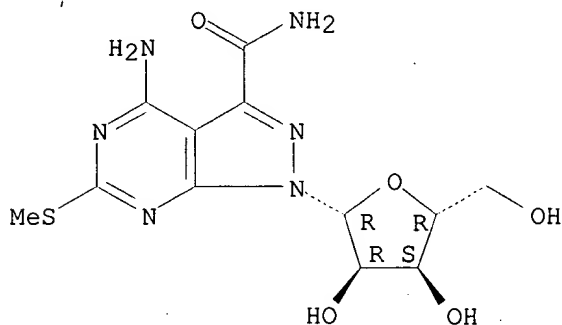
FS STEREOSEARCH

MF C12 H16 N6 O5 S

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



*Hit structure
for refs 1-25*

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 3 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 119952-34-0 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,6-bis(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

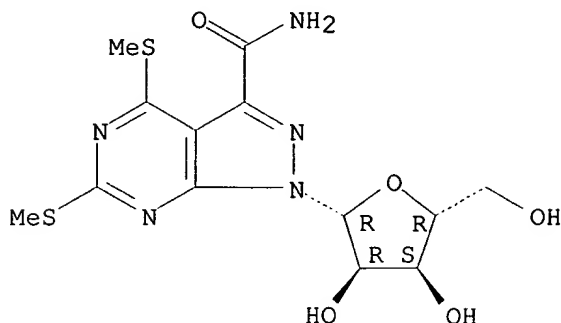
FS STEREOSEARCH

MF C13 H17 N5 O5 S2

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

L148 ANSWER 4 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 116019-28-4 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 6-methoxy-1-.beta.-D-ribofuranosyl-
(9CI) (CA INDEX NAME)

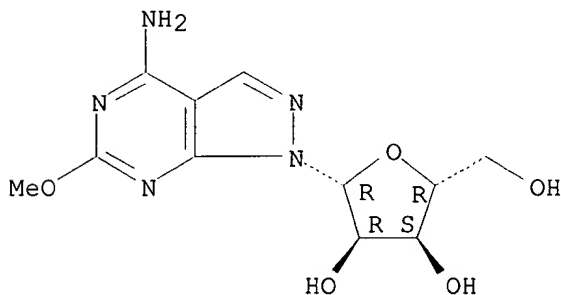
FS STEREOSEARCH

MF C11 H15 N5 O5

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

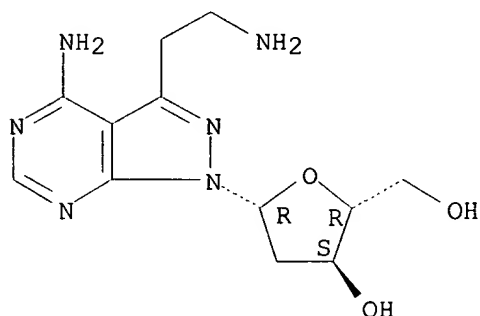
REFERENCE 1: 110:173656

REFERENCE 2: 109:93498

L148 ANSWER 5 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 107296-14-0 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-ethanamine, 4-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H18 N6 O3
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:214304

L148 ANSWER 6 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 96555-45-2 REGISTRY

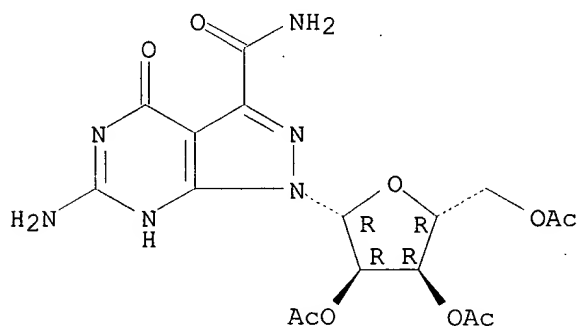
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 6-amino-4,5-dihydro-4-oxo-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C17 H20 N6 O9

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



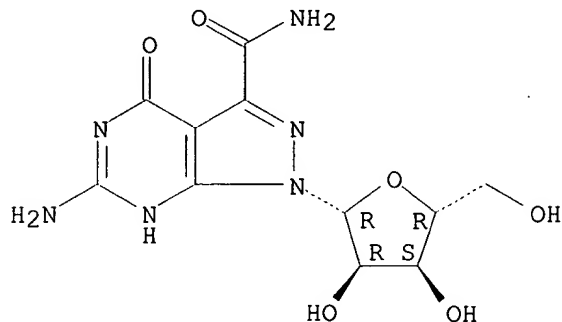
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1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 7 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN 96555-44-1 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 6-amino-4,5-dihydro-4-oxo-1-
.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H14 N6 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.

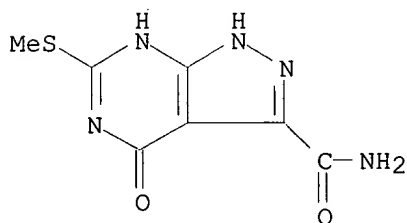


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 8 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN 96555-43-0 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5-dihydro-6-(methylthio)-4-
oxo- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C7 H7 N5 O2 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)



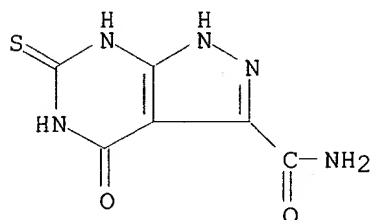
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 9 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 96555-42-9 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5,6,7-tetrahydro-4-oxo-6-thioxo- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C6 H5 N5 O2 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

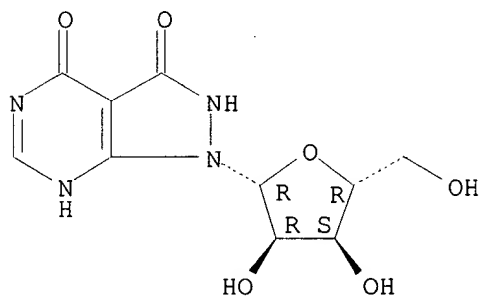
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

L148 ANSWER 10 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 90914-52-6 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, 1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C10 H12 N4 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

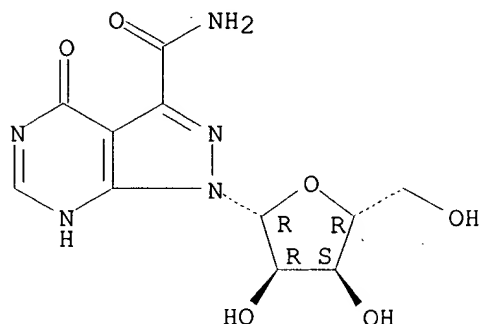
REFERENCE 1: 113:97956

REFERENCE 2: 101:91391

L148 ANSWER 11 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN 90914-46-8 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4,5-dihydro-4-oxo-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H13 N5 O6
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 103:37693

REFERENCE 2: 101:91391

L148 ANSWER 12 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 90914-44-6 REGISTRY

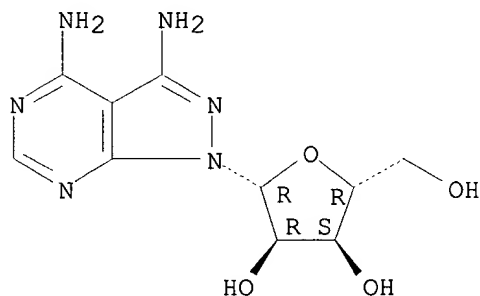
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4-diamine, 1-.beta.-D-ribofuranosyl- (9CI)
(CA INDEX NAME)

FS STEREOSEARCH

MF C10 H14 N6 O4

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 101:91391

L148 ANSWER 13 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 90914-38-8 REGISTRY

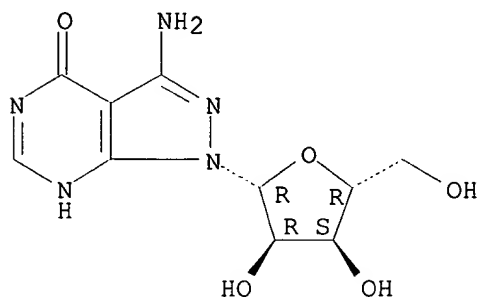
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 3-amino-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H13 N5 O5

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)

2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:165600

REFERENCE 2: 101:91391

L148 ANSWER 14 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 90914-32-2 REGISTRY

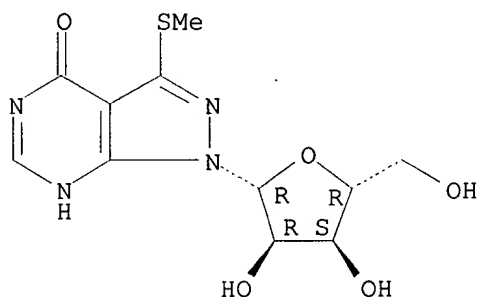
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-3-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C11 H14 N4 O5 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 101:91391

L148 ANSWER 15 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 85426-74-0 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino-1-.beta.-D-ribofuranosyl- (6CI)

OTHER NAMES:

CN 7-Deaza-8-azaguanosine

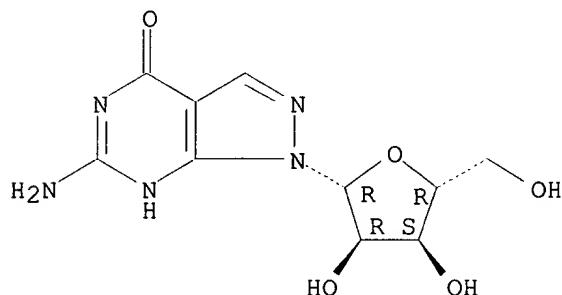
FS STEREOSEARCH

MF C10 H13 N5 O5

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 126:43598

REFERENCE 2: 117:204404

REFERENCE 3: 113:172618

REFERENCE 4: 113:59760

REFERENCE 5: 112:77867

REFERENCE 6: 112:56530

REFERENCE 7: 106:207230

REFERENCE 8: 103:37693

REFERENCE 9: 98:179811

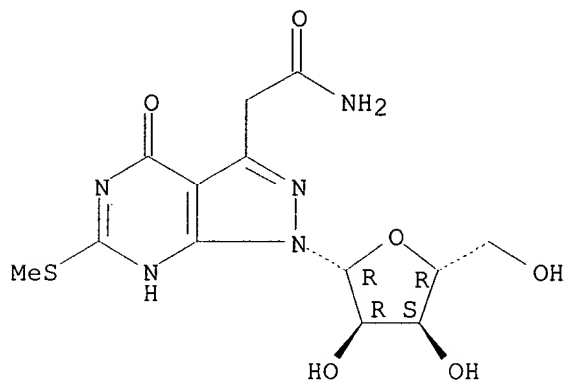
L148 ANSWER 16 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 78710-23-3 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-acetamide, 4,5-dihydro-6-(methylthio)-4-oxo-

1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)
 FS STEREOSEARCH
 MF C13 H17 N5 O6 S
 LC STN Files: BEILSTEIN*, CA, CAPLUS
 (*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 96:7014

REFERENCE 2: 95:98198

L148 ANSWER 17 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 78586-40-0 REGISTRY

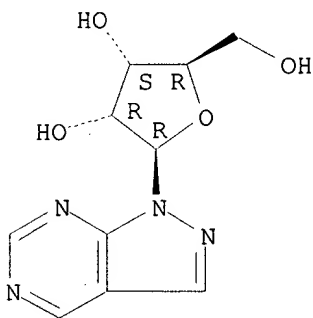
CN 1H-Pyrazolo[3,4-d]pyrimidine, 1-.beta.-D-ribofuranosyl- (6CI, 9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H12 N4 O4

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, TOXCENTER
 (*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

6 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 123:52110
REFERENCE 2: 106:46285
REFERENCE 3: 98:100752
REFERENCE 4: 97:72700
REFERENCE 5: 96:45864
REFERENCE 6: 95:125862

L148 ANSWER 18 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 76690-46-5 REGISTRY

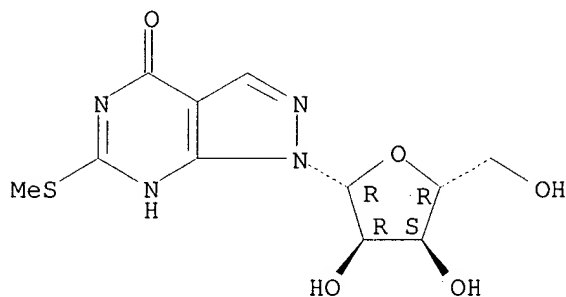
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C11 H14 N4 O5 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 112:56530
REFERENCE 2: 109:93507
REFERENCE 3: 96:7014
REFERENCE 4: 95:180745
REFERENCE 5: 94:103745

L148 ANSWER 19 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 76690-43-2 REGISTRY

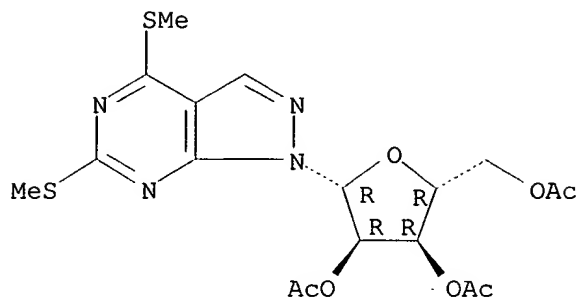
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C18 H22 N4 O7 S2

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 109:93507

REFERENCE 2: 96:7014

REFERENCE 3: 94:103745

L148 ANSWER 20 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 74525-95-4 REGISTRY

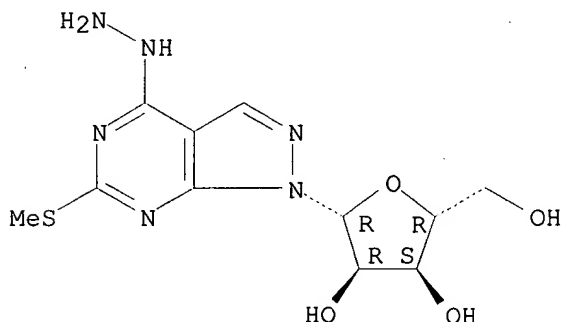
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)-1-.beta.-D-ribofuranosyl-, hydrazone (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C11 H16 N6 O4 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 109:93498

REFERENCE 2: 96:7014

REFERENCE 3: 95:180745

REFERENCE 4: 94:103745

REFERENCE 5: 93:88460

L148 ANSWER 21 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 74525-93-2 REGISTRY

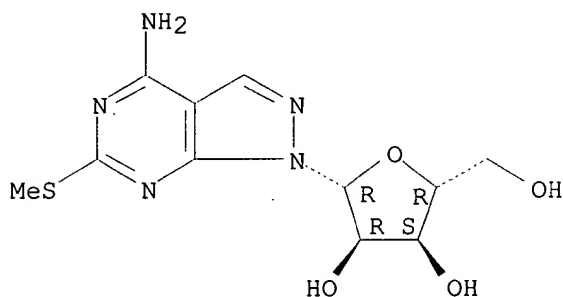
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 6-(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C11 H15 N5 O4 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1967 TO DATE)

8 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 110:173656

REFERENCE 2: 109:93507

REFERENCE 3: 109:93498

REFERENCE 4: 98:179811

REFERENCE 5: 96:7014

REFERENCE 6: 95:180745

REFERENCE 7: 94:103745

REFERENCE 8: 93:88460

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RN 74525-92-1 REGISTRY

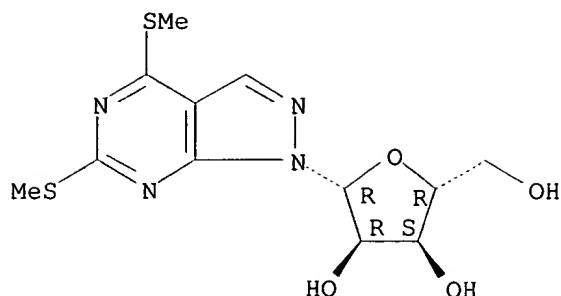
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C12 H16 N4 O4 S2

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 112:56530

REFERENCE 2: 109:93498

REFERENCE 3: 96:7014

REFERENCE 4: 95:180745

REFERENCE 5: 94:103745

REFERENCE 6: 93:88460

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RN 70421-30-6 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6-diamine, 1-.beta.-D-ribofuranosyl- (9CI)
(CA INDEX NAME)

OTHER CA INDEX NAMES:

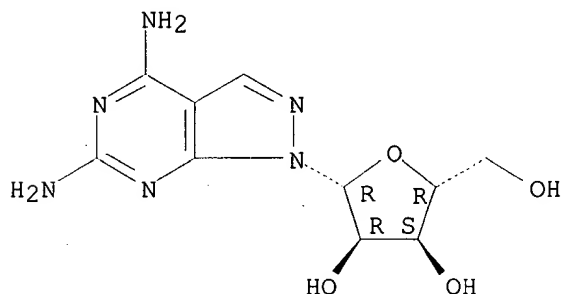
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-diamino-1-.beta.-D-ribofuranosyl- (6CI)

FS STEREOSEARCH

MF C10 H14 N6 O4

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 110:173656

REFERENCE 2: 91:15775

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RN 70421-26-0 REGISTRY

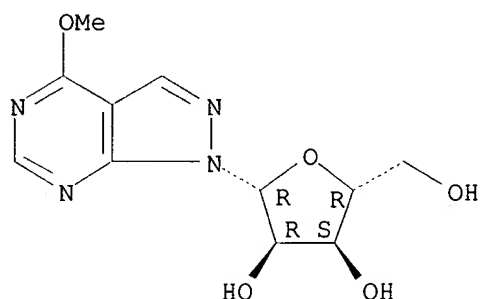
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-methoxy-1-.beta.-D-ribofuranosyl- (9CI)
(CA INDEX NAME)

FS STEREOSEARCH

MF C11 H14 N4 O5

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 99:185380

REFERENCE 2: 95:125862

REFERENCE 3: 91:15775

L148 ANSWER 25 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 64372-77-6 REGISTRY

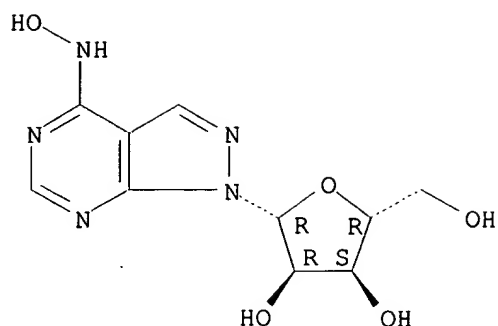
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-.beta.-D-ribofuranosyl-,
oxime (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H13 N5 O5

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 95:125862

REFERENCE 2: 87:184865

L148 ANSWER 26 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 64372-76-5 REGISTRY

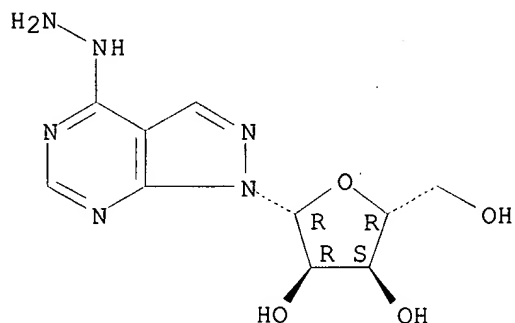
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1-.beta.-D-ribofuranosyl-, hydrazone
(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C10 H14 N6 O4

LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 97:72700

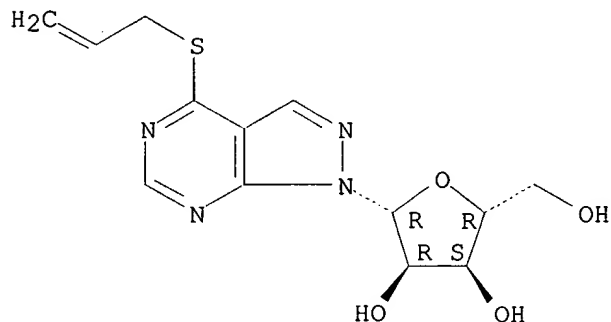
REFERENCE 2: 95:220260

REFERENCE 3: 95:125862

REFERENCE 4: 87:184865

L148 ANSWER 27 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN 64372-72-1 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(2-propenylthio)-1-.beta.-D-ribofuranosyl-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H16 N4 O4 S
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



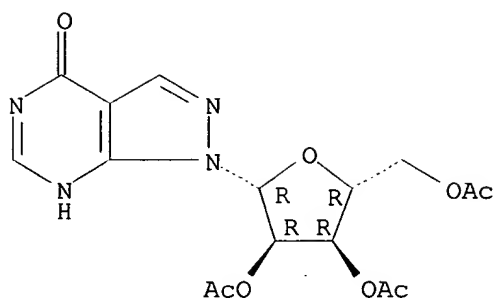
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:46285
REFERENCE 2: 98:100752
REFERENCE 3: 96:45864
REFERENCE 4: 95:125862
REFERENCE 5: 87:184865

L148 ANSWER 28 OF 44 REGISTRY COPYRIGHT 2002 ACS
RN 64372-69-6 REGISTRY
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-(2,3,5-tri-O-acetyl-
.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H18 N4 O8
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 99:158770

REFERENCE 2: 97:163399

REFERENCE 3: 95:125862

REFERENCE 4: 95:62573

REFERENCE 5: 87:184865

L148 ANSWER 29 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 60355-67-1 REGISTRY

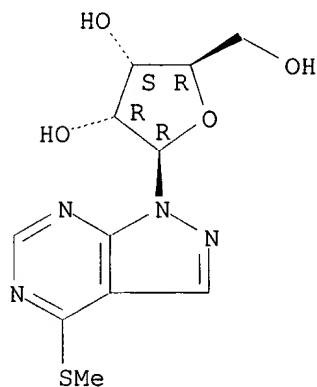
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)-1-.beta.-D-ribofuranosyl-
(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C11 H14 N4 O4 S

LC STN Files: BEILSTEIN*, CA, CANCERLIT, CAPLUS, MEDLINE, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 123:52110
REFERENCE 2: 111:90073
REFERENCE 3: 110:165600
REFERENCE 4: 109:142123
REFERENCE 5: 106:46285
REFERENCE 6: 106:27490
REFERENCE 7: 102:197604
REFERENCE 8: 102:43384
REFERENCE 9: 98:100752
REFERENCE 10: 97:72700

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RN 60355-66-0 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

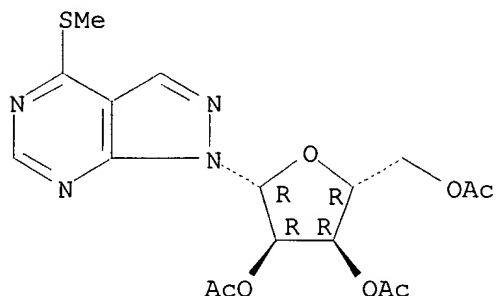
FS STEREOSEARCH

MF C17 H20 N4 O7 S

LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)

4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 97:163399
REFERENCE 2: 96:7014
REFERENCE 3: 94:103745
REFERENCE 4: 85:108923

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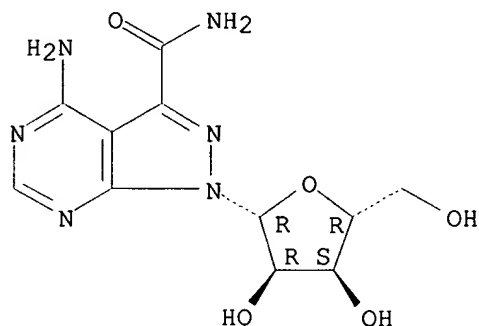
RN 55559-56-3 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 4-amino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 6-Azasangivamycin
FS STEREOSEARCH
MF C11 H14 N6 O5
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER,
USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 95:125862
REFERENCE 2: 91:168263
REFERENCE 3: 91:117147
REFERENCE 4: 85:177891
REFERENCE 5: 84:159532
REFERENCE 6: 82:171339

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RN 54524-71-9 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidine-4-thione, 1,5-dihydro-1-.beta.-D-
ribofuranosyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

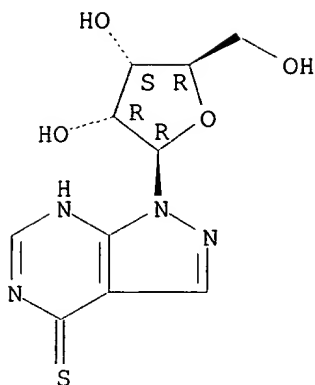
CN 8-Aza-6-mercapto-7-deazapurine riboside

FS STEREOSEARCH

MF C10 H12 N4 O4 S

LC STN Files: BEILSTEIN*, CA, CAPLUS, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

19 REFERENCES IN FILE CA (1967 TO DATE)
19 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 123:52110
REFERENCE 2: 114:74707
REFERENCE 3: 110:165600
REFERENCE 4: 106:81433
REFERENCE 5: 106:46285
REFERENCE 6: 102:214677
REFERENCE 7: 102:105763
REFERENCE 8: 102:199
REFERENCE 9: 101:187866
REFERENCE 10: 99:133327

L148 ANSWER 33 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN **46153-15-5** REGISTRY

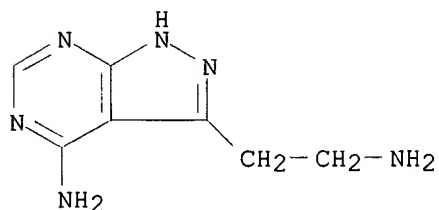
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-ethanamine, 4-amino- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF **C7 H10 N6**

CI COM

LC STN Files: CA, CAPLUS, CASREACT



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 106:214304

L148 ANSWER 34 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 24521-76-4 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5,6,7-tetrahydro-6-thioxo- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-mercapto- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione, 6-thio-

CN 4-Hydroxy-6-mercaptopyrazolo[3,4-d]pyrimidine

CN B 103U

FS 3D CONCORD

DR 3323-96-4

MF C5 H4 N4 O S

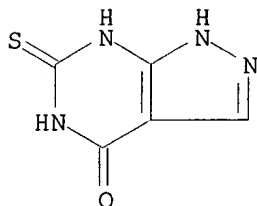
CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
17 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:180778

REFERENCE 2: 134:17496

REFERENCE 3: 133:357185

REFERENCE 4: 133:274164

REFERENCE 5: 133:36032

REFERENCE 6: 132:115157

REFERENCE 7: 129:182042

REFERENCE 8: 129:77920

REFERENCE 9: 126:137636

REFERENCE 10: 120:106914

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RN 16220-07-8 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-1-.beta.-D-ribofuranosyl-
(8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4-Hydroxy[3,4-d]pyrazolopyrimidine riboside

CN Allopurinol ribonucleoside

CN Allopurinol riboside

CN Allopurinol-1-ribonucleoside

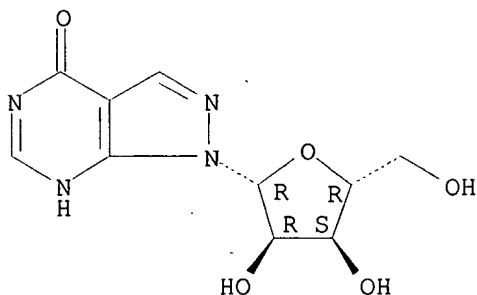
FS STEREOSEARCH

MF C10 H12 N4 O5

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CANCERLIT, CAPLUS, CASREACT, CHEMINFORMRX, DDFU, DRUGNL, DRUGU,
DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, SPECINFO,
TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

97 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

97 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:25078

REFERENCE 2: 131:29442

REFERENCE 3: 128:189094

REFERENCE 4: 125:53806

REFERENCE 5: 124:25693

REFERENCE 6: 123:52110

REFERENCE 7: 122:230098

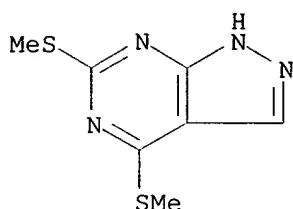
REFERENCE 8: 120:152877

REFERENCE 9: 120:107695

REFERENCE 10: 119:245177

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RN 6288-89-7 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4,6-bis(methylthio)- (6CI, 8CI, 9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C7 H8 N4 S2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



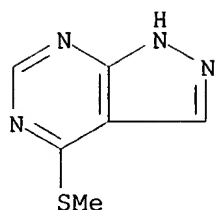
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 132:177005
REFERENCE 2: 125:58997
REFERENCE 3: 125:34025
REFERENCE 4: 124:117250
REFERENCE 5: 122:239865
REFERENCE 6: 120:217524
REFERENCE 7: 115:208428
REFERENCE 8: 114:102664
REFERENCE 9: 112:198289
REFERENCE 10: 112:56530

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RN 5418-10-0 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-(methylthio)- (6CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 4-Methylthiopyrazolo[3,4-d]pyrimidine
FS 3D CONCORD
MF C6 H6 N4 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, HODOC*, TOXCENTER
(*File contains numerically searchable property data)
Other Sources: EINECS**
(*Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:216978
REFERENCE 2: 134:208052
REFERENCE 3: 129:276241
REFERENCE 4: 127:109136
REFERENCE 5: 125:248292
REFERENCE 6: 124:176776
REFERENCE 7: 124:87669
REFERENCE 8: 122:239865
REFERENCE 9: 120:217524
REFERENCE 10: 118:7295

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RN 5334-26-9 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro-6-(methylthio)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-(methylthio)- (6CI, 8CI)

OTHER NAMES:

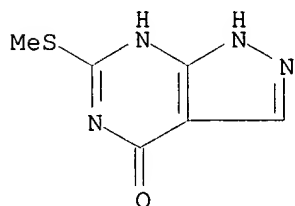
CN 6-(Methylthio)-1,7-dihydropyrazolo[3,4-d]pyrimidin-4-one

FS 3D CONCORD

MF C6 H6 N4 O S

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1967 TO DATE)
6 REFERENCES IN FILE CAPLUS (1967 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 134:17496
REFERENCE 2: 103:37693
REFERENCE 3: 95:180745
REFERENCE 4: 86:150384
REFERENCE 5: 79:78743
REFERENCE 6: 72:31827

L148 ANSWER 39 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 3258-05-7 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine, 1'-beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino-1'-beta.-D-ribofuranosyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 4-Amino-1-(.beta.-d-ribofuranosyl)pyrazolo-[3,4-d]pyrimidine

CN 6-Azatubercidin

CN 7-Deaza-8-azaadenosine

FS STEREOSEARCH

DR 21247-86-9

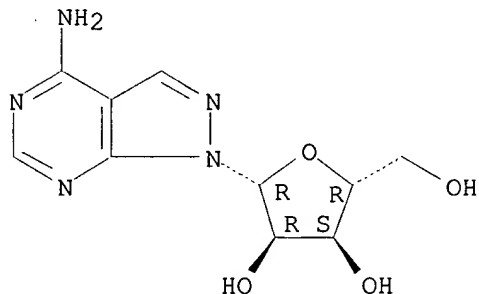
MF C10 H13 N5 O4

CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMINFORMRX, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

37 REFERENCES IN FILE CA (1967 TO DATE)
37 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:63677

REFERENCE 2: 131:223117
REFERENCE 3: 126:16189
REFERENCE 4: 123:52110
REFERENCE 5: 119:91079
REFERENCE 6: 107:112526
REFERENCE 7: 107:19783
REFERENCE 8: 106:172780
REFERENCE 9: 106:46285
REFERENCE 10: 105:54102

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RN 2537-04-4 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 4-Hydroxy-6-aminopyrazolo[3,4-d]pyrimidine

CN 8-Aza-7-deazaguanine

CN HAPP

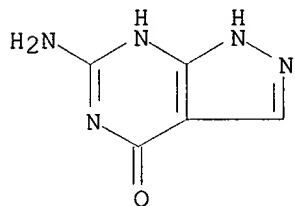
FS 3D CONCORD

MF C5 H5 N5 O

CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, PHAR, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:305109
REFERENCE 2: 135:15068
REFERENCE 3: 134:26053
REFERENCE 4: 131:296189

REFERENCE 5: 131:282379
REFERENCE 6: 130:163642
REFERENCE 7: 129:185075
REFERENCE 8: 128:317694
REFERENCE 9: 118:7344
REFERENCE 10: 106:207230

L148 ANSWER 41 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 2465-59-0 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Pyrazolo[3,4-d]pyrimidine-4,6(5H)-dione, 1,7-dihydro- (6CI)

OTHER NAMES:

CN 1H,3H,9H-Alloxanthine

CN 1H-Pyrazolo[3,4-d]pyrimidin-4,6-diol

CN 4,6-Dihydroxypyrazolo[3,4-d]pyrimidine

CN Alloxanthine

CN BW 55-5

CN Oxipurinol

CN Oxoallopurinol

CN Oxypurinol

FS 3D CONCORD

DR 16220-06-7, 22767-93-7, 4318-51-8

MF C5 H4 N4 O2

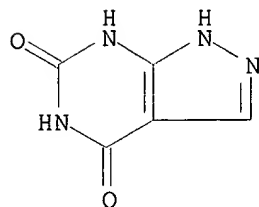
CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, PHAR, PROMT, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: EINECS**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

361 REFERENCES IN FILE CA (1967 TO DATE)

11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

361 REFERENCES IN FILE CAPLUS (1967 TO DATE)

10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:15591

REFERENCE 2: 136:172182
REFERENCE 3: 136:163266
REFERENCE 4: 136:79508
REFERENCE 5: 136:107
REFERENCE 6: 135:251362
REFERENCE 7: 135:205240
REFERENCE 8: 135:148504
REFERENCE 9: 135:73328
REFERENCE 10: 135:15732

L148 ANSWER 42 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 2380-63-4 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 4-Amino-1H-pyrazolo[3,4-d]pyrimidine

CN 4-Aminopyrazolo[3,4-d]pyrimidine

CN 8-Aza-7-deazaadenine

FS 3D CONCORD

MF C5 H5 N5

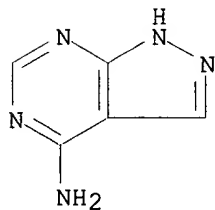
CI COM

LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

193 REFERENCES IN FILE CA (1967 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

193 REFERENCES IN FILE CAPLUS (1967 TO DATE)

49 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:396964
REFERENCE 2: 136:378311
REFERENCE 3: 136:377390

REFERENCE 4: 136:305109
REFERENCE 5: 135:264486
REFERENCE 6: 135:180762
REFERENCE 7: 135:101932
REFERENCE 8: 135:67903
REFERENCE 9: 135:15068
REFERENCE 10: 134:348925

L148 ANSWER 43 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 315-30-0 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

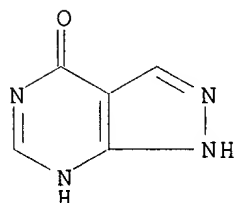
CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol
CN 4-Hydroxy-1H-pyrazolo[3,4-d]pyrimidine
CN 4-Hydroxypyrazolo[3,4-d]pyrimidine
CN Allopur
CN Allopurinol
CN Allopurinol(I)
CN Atisuril
CN Bloxanth
CN BW 56-158
CN Epidropal
CN Foligan
CN Gichtex
CN Gotax
CN HPP
CN Milurit
CN Uricemil
CN Uriprim
CN Urosin
CN Zyloprim
CN Zyloric
FS 3D CONCORD
DR 22767-92-6, 39464-14-7, 184856-42-6
MF C5 H4 N4 O
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1862 REFERENCES IN FILE CA (1967 TO DATE)
29 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1866 REFERENCES IN FILE CAPLUS (1967 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:24099
REFERENCE 2: 137:15717
REFERENCE 3: 137:15591
REFERENCE 4: 137:15456
REFERENCE 5: 137:3174
REFERENCE 6: 136:398181
REFERENCE 7: 136:397931
REFERENCE 8: 136:395267
REFERENCE 9: 136:395180
REFERENCE 10: 136:390902

L148 ANSWER 44 OF 44 REGISTRY COPYRIGHT 2002 ACS

RN 271-80-7 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine (6CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1H-Pyrazolyl(3,4-d)pyrimidine

CN 5H-Pyrazolo[3,4-d]pyrimidine

FS 3D CONCORD

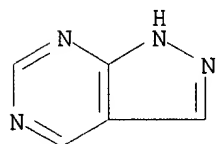
DR 35760-86-2

MF C5 H4 N4

CI COM, RPS

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER,
USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

45 REFERENCES IN FILE CA (1967 TO DATE)
27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
45 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:318825
REFERENCE 2: 136:179591
REFERENCE 3: 135:237547

REFERENCE 4: 135:15068
 REFERENCE 5: 134:218320
 REFERENCE 6: 133:129894
 REFERENCE 7: 132:146163
 REFERENCE 8: 131:296189
 REFERENCE 9: 130:206202
 REFERENCE 10: 130:61060

=> d bib abs hitrn tot

L156 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:659532 HCAPLUS

DN 131:296189

TI **Oligonucleotides** containing pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination

IN **Meyer, Rich B., Jr.**; Afonina, Irina A.; Kutayavin, Igor V.

PA Epoch Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|--------------|-----------------|--------------|
| PI | WO 9951775 | A1 | 19991014 | WO 1999-US7492 | 19990405 <-- |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6127121 | A | 20001003 | US 1998-54830 | 19980403 |
| | CA 2327547 | AA | 19991014 | CA 1999-2327547 | 19990405 <-- |
| | AU 9934724 | A1 | 19991025 | AU 1999-34724 | 19990405 <-- |
| | EP 1068358 | A1 | 20010117 | EP 1999-916394 | 19990405 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | JP 2002510507 | T2 | 20020409 | JP 2000-542486 | 19990405 <-- |
| PRAI | US 1998-54830 | A | 19980403 <-- | | |
| | WO 1999-US7492 | W | 19990405 | | |
| AB | Oligonucleotides in which one or more purine residues are substituted by pyrazolo[3,4-d]pyrimidines exhibit improved hybridization properties. Oligonucleotides contg. pyrazolo[3,4-d]pyrimidine base analogs have higher melting temps. than unsubstituted oligonucleotides of identical sequence. Thus, in assays involving hybridization of an oligonucleotide probe to a target polynucleotide sequence, higher signals are obtained. In addn., mismatch discrimination is enhanced when pyrazolo[3,4-d]pyrimidine-contg. oligonucleotides are used as hybridization probes, making them useful as probes and primers for hybridization, amplification and sequencing procedures, particularly those in which single- or multiple- nucleotide mismatch discrimination is required. | | | | |
| IT | 271-80-7D, 1H-Pyrazolo[3,4-d]pyrimidine, derivs. 315-30-0 2380-63-4, 1H-Pyrazolo[3,4-d]pyrimidin-4-amine 2537-04-4 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (oligonucleotides contg. pyrazolo[3,4-d]pyrimidines for hybridization and mismatch discrimination) | | | | |

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L156 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:659404 HCAPLUS

DN 131:282379

TI Hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders

IN Hedgpeth, Joel; Afonina, Irina A.; Kut'yavin, Igor V.; Lukhtanov, Eugeny A.; Belousov, Evgeniy S.; Meyer, Rich B., Jr.

PA Epoch Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|--------------|
| PI | WO 9951621 | A2 | 19991014 | WO 1999-US7487 | 19990405 <-- |
| | WO 9951621 | A3 | 20011108 | | |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6312894 | B1 | 20011106 | US 1998-54832 | 19980403 <-- |
| | CA 2329135 | AA | 19991014 | CA 1999-2329135 | 19990405 <-- |
| | AU 9934721 | A1 | 19991025 | AU 1999-34721 | 19990405 <-- |
| | EP 1144429 | A2 | 20011017 | EP 1999-916391 | 19990405 <-- |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| PRAI | US 1998-54832 | A | 19980403 | <-- | |
| | US 1995-415370 | A2 | 19950403 | <-- | |
| | WO 1999-US7487 | W | 19990405 | | |

AB Conjugates between a minor groove binding mol., such as the trimer of 1,2-dihydro-(3 H)-pyrrolo[3,2-e]indole-7-carboxylate (CDPI3), and an **oligonucleotide** form unusually stable hybrids with complementary target sequences, in which the tethered CDPI3 group resides in the minor groove of the duplex. These conjugates can be used as probes and primers. Due to their unusually high binding affinity, conjugates as short as 8-mers can be used as amplification primers with high specificity and efficiency. Minor groove binder (MGB) conjugation also increases the discriminatory power of short **oligonucleotides**, providing enhanced detection of **nucleotide** sequence mismatches by short **oligonucleotides**. The MGB-conjugated probes and primers described herein facilitate various analytic and diagnostic procedures, such as amplification reactions, PCR, detection of single-nucleotide polymorphisms, gene hunting, differential display, **fluorescence** energy transfer, hydrolyzable probe assays and others; by allowing the use of shorter **oligonucleotides**, which have higher specificity and better discriminatory power.

IT 2380-63-4, 4-Amino-1H-pyrazolo[3,4-d]pyrimidine 2465-59-0
2537-04-4

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
BIOL (Biological study); OCCU (Occurrence)

(**oligonucleotides** conjugates contg.; hybridization and mismatch discrimination using **oligonucleotides** conjugated to minor groove binders)

L156 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS

AN 1992:16348 HCAPLUS

DN 116:16348

TI A novel biotinylated adenylate analog derived from pyrazolo[3,4-d]pyrimidine for **labeling** DNA probes

AU Petrie, Charles R.; Adams, A. David; Stamm, Michael; Van Ness,

Jeffery; Watanabe, Susan M.; Meyer, Rich B., Jr.
CS MicroProbe Corp., Bothell, WA, 98021, USA
SO Bioconjugate Chem. (1991), 2(6), 441-6
CODEN: BCCHE5; ISSN: 1043-1802
DT Journal
LA English
AB A novel dATP analog 3-[5-[(N-biotinyl-6-aminocaproyl)amino]pentyl]-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1H-pyrazolo[3,4-d]pyrimidin-4-amine 5'-triphosphate, which is modified at the 3-position with a flexible linker arm bearing a terminal biotin moiety, was synthesized. This **nucleotide** is readily incorporated into DNA probes by nick translation. These probes hybridize to complementary targets as well as probes **labeled** with bio-dUTP, as judged by slot blot. When incorporated into **oligonucleotides**, they do not cause the loss of hybridization efficiency that an N-6-substituted adenine **nucleotide** does when incorporated into the same sites in the **oligonucleotide**.
IT 129357-76-2P
RL: PREP (Preparation)
(prepn. and deprotection and biotinylation of)
IT 129357-70-6P 129357-75-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of)
IT 137823-48-4P
RL: PREP (Preparation)
(prepn. of)
IT 137823-47-3P
RL: PREP (Preparation)
(prepn. of, for **labeling** of DNA probes)

L156 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS

AN 1990:532717 HCAPLUS

DN 113:132717

TI Preparation of pyrazolo[3,4-d]pyrimidine derivatives as intermediates for diagnostic **oligonucleotides**

IN Petrie, Charles R.; Meyer, Rich B.

PA Microprobe Corp., USA

SO PCT Int. Appl., 41 pp.

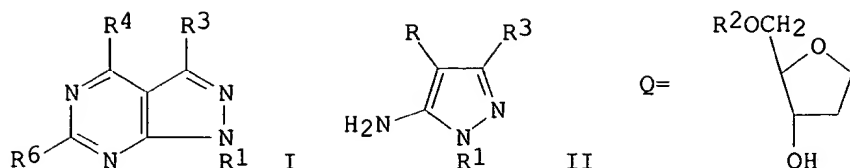
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|--------------|
| PI | WO 9003370 | A1 | 19900405 | WO 1989-US4184 | 19890926 <-- |
| | W: JP | | | | |
| | RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| | CA 1338379 | A1 | 19960611 | CA 1989-613651 | 19890927 <-- |
| | US 5824796 | A | 19981020 | US 1994-334490 | 19941104 <-- |
| PRAI | US 1988-250474 | A | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | <-- | |
| | US 1993-49807 | B1 | 19930420 | <-- | |
| OS | MARPAT 113:132717 | | | | |
| GI | | | | | |



AB The title compds. [I; R₁ = H, sugar moiety optionally substituted at its 3' or 5' position with mono-, di-, or triphosphate or a reactive **group** suitable for **nucleotide** bond formation; provided that when R₃ = H, R₁ .noteq. H; R₃ = H, W(X)nA; W, X = chem. linker arm; A = intercalator, electrophilic **crosslinker**, **reporter group**; R₄, R₆ = H, OH, SH, alkylthio, NH₂, NH(CH₂)_tNH₂; n = 0,1; t = 0-12] were prepd. by (1) reaction of 5-aminopyrazole-4-carbonitriles (II; R = cyano; R₁, R₃ = as above) with a dialkoxymethyl carboxylate followed by reaction with NH₃ to give I (R₄ = NH₂), (2) reaction of II (R = CONH₂; R₁, R₃ = as above) with a dialkoxymethyl carboxylate to give I (R₄ = OH), or (3) reaction of II (R = cyano, CONH₂; R₁, R₃ = as above) with an alkyl xanthate salt followed by an alkyl halide and oxidn. An **oligonucleotide** sequence contg. .gtoreq.1 of **labeled I** (R₁ = sugar moiety as described above), particularly **labeled** with biotin, is used as DNA hybridization probe and as a kit for identifying target DNA sequence comprising the above **labeled oligonucleotide** complementary to the target DNA, a denaturation reagent, and a hybridization reaction mixt. (no data). Thus, 5-amino-1-(2-deoxy-3,5-di-O-toluoyl-.beta.-D-erythropentofuranosyl)-3-[(5-tritylamino)pentyl]pyrazole-4-carbonitrile was heated 5 h at 80-90.degree. with AcOCH₂(OEt)₂ and the intermediate syrup was treated 2 days at room temp. with methanolic NH₃ to give 77% I [R₁ = Q, R₂ = R₆ = H, R₃ = (CH₂)₅NHCPh₃, R₄ = NH₂]. This was phosphorylated by reaction with POC1₃ in (MeO)₃PO followed by hydrolysis with 0.1 M NH₄HCO₃ to give I [R₁ = Q, R₂ = (HO)₂P(O), R₃ = (CH₂)₅NHCPh₃, R₄ = NH₂, R₆ = H] which was hydrogenolyzed over Pd(OH)₂/C in cyclohexadiene and then acylated with N-hydroxysuccinimidyl 6-biotinamidocaproate in DMF contg. Et₃N to give I [R₁ = Q, R₂ = (HO)₂P(O), R₃ = 5-[(6-biotinamido)hexamido]pentyl, R₄ = NH₂, R₆ = H].

IT 129357-75-1P 129357-76-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction of, in prepn. of biotin-**labeled** deoxyribofuranosylpyrazolopyrimidine **nucleotide**)

IT 129357-70-6P 129357-71-7P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as intermediate for **oligonucleotide** hybridization probes)

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L158 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2002 ACS

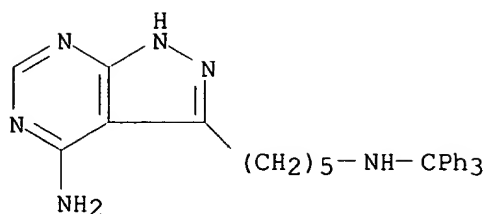
RN 137823-48-4 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)

MF C29 H30 N6

SR CA

LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 116:16348

L158 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 129357-76-2 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-1-(2-deoxy-5-O-phosphono-.beta.-D-erythro-pentofuranosyl)-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)

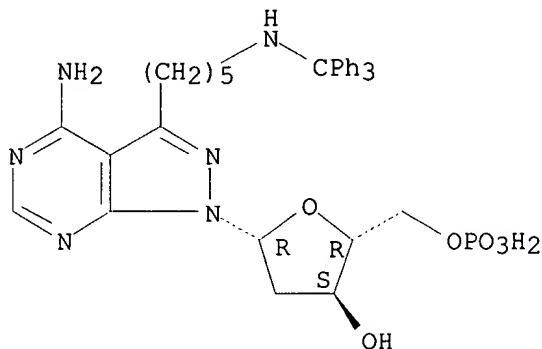
FS STEREOSEARCH

MF C34 H39 N6 O6 P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:330802

REFERENCE 2: 126:153646

REFERENCE 3: 119:221156

REFERENCE 4: 116:16348

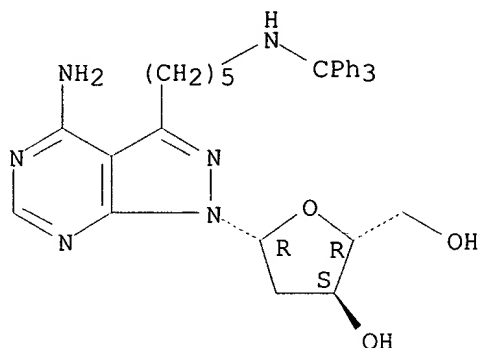
REFERENCE 5: 113:132717

L158 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 129357-75-1 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-3-pentanamine, 4-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-N-(triphenylmethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C34 H38 N6 O3
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:330802
REFERENCE 2: 126:153646
REFERENCE 3: 119:221156
REFERENCE 4: 116:16348
REFERENCE 5: 113:132717

L158 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 2537-04-4 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol, 6-amino- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 4-Hydroxy-6-aminopyrazolo[3,4-d]pyrimidine

CN 8-Aza-7-deazaguanine

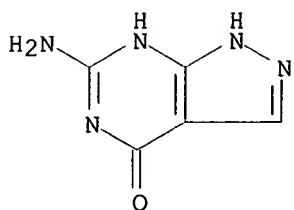
CN HAPF

FS 3D CONCORD

MF C5 H5 N5 O

CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, PHAR, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:305109
REFERENCE 2: 135:15068
REFERENCE 3: 134:26053
REFERENCE 4: 131:296189
REFERENCE 5: 131:282379
REFERENCE 6: 130:163642
REFERENCE 7: 129:185075
REFERENCE 8: 128:317694
REFERENCE 9: 118:7344
REFERENCE 10: 106:207230

L158 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 2465-59-0 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidine-4,6(5H,7H)-dione (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Pyrazolo[3,4-d]pyrimidine-4,6(5H)-dione, 1,7-dihydro- (6CI)

OTHER NAMES:

CN 1H,3H,9H-Alloxanthine

CN 1H-Pyrazolo[3,4-d]pyrimidin-4,6-diol

CN 4,6-Dihydroxypyrazolo[3,4-d]pyrimidine

CN Alloxanthine

CN BW 55-5

CN Oxipurinol

CN Oxoallopurinol

CN Oxypurinol

FS 3D CONCORD

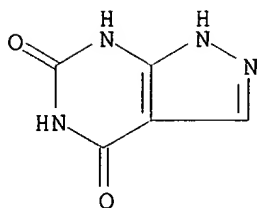
DR 16220-06-7, 22767-93-7, 4318-51-8

MF C5 H4 N4 O2

CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*,
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU,
DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, PHAR, PROMT,
SPECINFO, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

361 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
361 REFERENCES IN FILE CAPLUS (1967 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:15591
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REFERENCE 3: 136:163266
REFERENCE 4: 136:79508
REFERENCE 5: 136:107
REFERENCE 6: 135:251362
REFERENCE 7: 135:205240
REFERENCE 8: 135:148504
REFERENCE 9: 135:73328
REFERENCE 10: 135:15732

L158 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 2380-63-4 REGISTRY

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-amine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidine, 4-amino- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 4-Amino-1H-pyrazolo[3,4-d]pyrimidine

CN 4-Aminopyrazolo[3,4-d]pyrimidine

CN 8-Aza-7-deazaadenine

FS 3D CONCORD

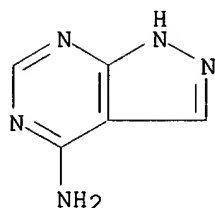
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CI COM

LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS,
CASREACT, CHEMCATS, CHEMLIST, CSCHEM, EMBASE, GMELIN*, IFICDB, IFIPAT,
IFIUDB, MEDLINE, NIOSHTIC, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER,
USPATFULL

(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
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49 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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REFERENCE 3: 136:377390

REFERENCE 4: 136:305109

REFERENCE 5: 135:264486

REFERENCE 6: 135:180762

REFERENCE 7: 135:101932

REFERENCE 8: 135:67903

REFERENCE 9: 135:15068

REFERENCE 10: 134:348925

L158 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 315-30-0 REGISTRY

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 1,5-dihydro- (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1H-Pyrazolo[3,4-d]pyrimidin-4-ol

CN 4-Hydroxy-1H-pyrazolo[3,4-d]pyrimidine

CN 4-Hydroxypyrazolo[3,4-d]pyrimidine

CN Allopur

CN Allopurinol

CN Allopurinol(I)

CN Atisuril

CN Bloxanth

CN BW 56-158

CN Epidropal

CN Foligan

CN Gichtex

CN Gotax

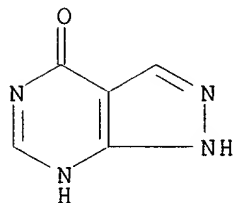
CN HPP

CN Milurit

CN Uricemil

CN Uriprim

CN Urosin
CN Zyloprim
CN Zyloric
FS 3D CONCORD
DR 22767-92-6, 39464-14-7, 184856-42-6
MF C5 H4 N4 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGPAT, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHARMASEARCH, PROMT, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(*Enter CHEMLIST File for up-to-date regulatory information)



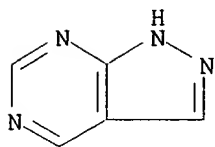
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9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:24099
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REFERENCE 3: 137:15591
REFERENCE 4: 137:15456
REFERENCE 5: 137:3174
REFERENCE 6: 136:398181
REFERENCE 7: 136:397931
REFERENCE 8: 136:395267
REFERENCE 9: 136:395180
REFERENCE 10: 136:390902

L158 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN 271-80-7 REGISTRY
CN 1H-Pyrazolo[3,4-d]pyrimidine (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1H-Pyrazolyl(3,4-d)pyrimidine
CN 5H-Pyrazolo[3,4-d]pyrimidine
FS 3D CONCORD
DR 35760-86-2

MF C5 H4 N4
CI COM, RPS
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, MEDLINE, TOXCENTER,
USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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45 REFERENCES IN FILE CAPLUS (1967 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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REFERENCE 7: 132:146163
REFERENCE 8: 131:296189
REFERENCE 9: 130:206202
REFERENCE 10: 130:61060

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FILE COVERS 1907 - 9 Jul 2002 VOL 137 ISS 2
FILE LAST UPDATED: 8 Jul 2002 (20020708/ED)

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=> d all tot 1184

L184 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:754456 HCAPLUS

DN 133:306344

TI Targeted mutagenesis in living cells using modified **oligonucleotides**

IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall, Alexander A.

PA Epoch Pharmaceuticals, Inc., USA

SO U.S., 19 pp., Cont.-in-part of U.S. 5,849,482.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-68

ICS C07H021-04

NCL 435375000

CC 3-2 (Biochemical **Genetics**)

Section cross-reference(s): 10, 11, 12,

FAN.CNT 8

| | PATENT NO. | KIND | DATE |
|------|----------------|------|----------|
| PI | US 6136601 | A | 20001024 |
| | US 5849482 | A | 19981215 |
| PRAI | US 1991-748138 | B1 | 19910821 |
| | US 1994-178733 | B2 | 19940107 |
| | US 1995-485611 | A2 | 19950607 |
| | US 1988-250474 | B2 | 19880928 |
| | US 1989-353857 | B1 | 19890518 |
| | US 1993-11482 | B2 | 19930126 |
| | US 1993-49807 | B1 | 19930420 |
| | US 1994-226949 | A2 | 19940627 |
| | US 1994-334490 | A | 19941104 |

AB A method for introducing a site-specific mutation into a target **polynucleotide** sequence is presented. The method involves the use of an **oligonucleotide** capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The **oligonucleotide** of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified **oligonucleotide** is bound to its target sequence, the electrophilic group is able to interact with a nearby **nucleotide** in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are also disclosed.

ST target mutagenesis living cell modification **oligonucleotide**

IT Animal cell line

(COS; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Quaternary structure

(DNA triplex; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Enzymes, biological studies

RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)

This part

(DNA-recombining, **oligonucleotide** with; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Escherichia coli
(MBM7070, transformation by electroporation; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Chromosome
(animal; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **Crosslinking**
(between **oligonucleotide** and plasmid; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Pathogen
(genome of, mutagenesis of target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Plasmids
(pSP189; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Chromosome
(plant, target sequence in; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Mutagenesis
(site-directed; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(supF; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Animal tissue culture
Electroporation
Transformation, **genetic**
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT **Oligonucleotides**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Genome
(viral, of pathogen; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT Mutagens
(with electrophilic group or alkylating agent; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 55-86-7, Nitrogen mustard
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bifunctional, alkylating group; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 171258-27-8D, **oligonucleotides** contg. 237059-49-3D, **oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 6872-73-7, Coralyne
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(triplex stabilizer; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 302479-26-1, 1: PN: US6136601 SEQID: 5 unclaimed DNA 302479-27-2, 2: PN: US6136601 SEQID: 6 unclaimed DNA 302479-28-3, 3: PN: US6136601 SEQID: 7 unclaimed DNA 302479-29-4, 4: PN: US6136601 SEQID: 8 unclaimed DNA 302479-30-7, 5: PN: US6136601 SEQID: 9 unclaimed DNA 302479-31-8, 6: PN: US6136601 SEQID: 1 unclaimed DNA 302479-32-9, 8: PN: US6136601 SEQID: 3 unclaimed DNA 302479-33-0, 9: PN: US6136601 SEQID: 4 unclaimed DNA

RL: PRP (Properties)

(unclaimed **nucleotide** sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

IT 302479-34-1

RL: PRP (Properties)

(unclaimed sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)

RE.CNT 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L184 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:505631 HCAPLUS

DN 131:154471

TI Targeted mutagenesis in living cells using modified
oligonucleotides

IN Meyer, Rich B., Jr.; Gamper, Howard B.; Kuttyavin, Igor V.; Gall,
Alexander A.

PA Epoch Pharmaceuticals, Inc., USA

SO U.S., 20 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12N015-00

ICS C07K021-04

NCL 435172100

CC 3-2 (Biochemical Genetics)

Section cross-reference(s): 13

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | US 5935830 | A | 19990810 | US 1997-827116 | 19970326 |
| | US 5849482 | A | 19981215 | US 1995-485611 | 19950607 <-- |
| | CA 2223584 | AA | 19961219 | CA 1996-2223584 | 19960607 |
| PRAI | US 1995-485611 | A2 | 19950607 | | |
| | US 1988-250474 | B2 | 19880928 | <-- | |
| | US 1989-353857 | B1 | 19890518 | | |
| | US 1991-748138 | B1 | 19910821 | | |
| | US 1993-11482 | B2 | 19930126 | | |
| | US 1993-49807 | B1 | 19930420 | | |
| | US 1994-178733 | B2 | 19940107 | | |
| | US 1994-226949 | A2 | 19940627 | | |
| | US 1994-334490 | A | 19941104 | | |

AB A method for introducing a site-specific mutation into a target polynucleotide sequence is presented. The method involves the use of an oligonucleotide capable of binding to the target sequence, either by triplex formation (mediated by Hoogsteen, reverse Hoogsteen or equiv. base pairing) or by Watson/Crick base pairing (in the presence of a recombinase enzyme). The oligonucleotide of the invention is modified by the covalent attachment of one or more electrophilic groups. When a modified oligonucleotide is bound to its target sequence, the electrophilic group is able to interact with a nearby

nucleotide in the target sequence, causing a modification to the **nucleotide** that results in a change in **nucleotide** sequence. Compns. used in the practice of the method are disclosed. Also disclosed are arm-leaving group structure having the formula -A-L such as (CH₂)_qY(CH₂)_mL, (CH₂)_qNHCO(CH₂)_m(X)_n'N(R₁)(CH₂)_pL, or (CH₂)_q'O(CH₂)_q'NHCO(CH₂)_m(X)_n'N(R₁)(CH₂)_pL (q=0-8, q'=1-7; Y=NH₂, OH, SH, COOH, C.ident.CH; X= (Cl, Br, lower alkyl, lower alkoxy-substituted) Ph; n'=0, 1; p= 1-6; R₁=H, lower alkyl, or (CH₂)_pL; L=Cl, Br, I, SO₂R₂, S+R₃; R₃,R₄=Cl-6 alkyl, aryl, heteroaryl, or R₃ and R₄ form a Cl-6-alkylene bridge).

- ST target mutagenesis living cell modification **oligonucleotide**
- IT Quaternary structure
(DNA triplex; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
(DNA-recombining, **oligonucleotide** with; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Plasmids
(pSP189; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Chromosome
(plant, animal; target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Mutagenesis
(site-directed; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(supF; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Animal tissue culture
(targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT Genome
(viral, of pathogen; target sequence; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT 55-86-7, Nitrogen mustard
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bifunctional, alkylating group; targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT 171258-27-8D, **oligonucleotides** contg. 237059-49-3D, **oligonucleotides** contg.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(targeted mutagenesis in living cells using modified **oligonucleotides**)
- IT 6872-73-7, Coralyne
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(triplex stabilizer; targeted mutagenesis in living cells using modified **oligonucleotides**)

RE.CNT 155 THERE ARE 155 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L184 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:148844 HCAPLUS

DN 126:153646

TI **Oligonucleotide** derivs. preparation for target **nucleic**
 acid alkylation and **crosslinking**, gene mapping, and gene therapy
 IN **Meyer, Rich B., Jr.**; Gamper, Howard B.; Kutyavin, Igor V.; Gall,
 Alexander A.; **Petrie, Charles R.**; **Tabone, John C.**;
Hurst, Gerald D.

PA Microprobe Corporation, USA

SO PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H021-00

CC 3-1 (Biochemical **Genetics**)

Section cross-reference(s): 1, 33

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|--------------|
| PI | WO 9640711 | A1 | 19961219 | WO 1996-US9551 | 19960607 |
| | W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG | | | | |
| | RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | US 5849482 | A | 19981215 | US 1995-485611 | 19950607 <-- |
| | CA 2223584 | AA | 19961219 | CA 1996-2223584 | 19960607 |
| | AU 9661035 | A1 | 19961230 | AU 1996-61035 | 19960607 |
| | AU 709924 | B2 | 19990909 | | |
| | EP 842186 | A1 | 19980520 | EP 1996-918350 | 19960607 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | JP 11509528 | T2 | 19990824 | JP 1996-501849 | 19960607 |
| PRAI | US 1995-485611 | A | 19950607 | | |
| | US 1988-250474 | B2 | 19880928 | <-- | |
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| | | |
|----------------|----|----------|
| US 1991-748138 | B1 | 19910821 |
| US 1993-11482 | B2 | 19930126 |
| US 1993-49807 | B1 | 19930420 |
| US 1994-178733 | B2 | 19940107 |
| US 1994-226949 | A2 | 19940627 |
| US 1994-334490 | A | 19941104 |
| WO 1996-US9551 | W | 19960607 |

- AB **Oligonucleotide** derivs. (ODNs) include a sequence that is complementary to a target sequence in single-stranded RNA, or single- or double-stranded DNA, and an alkylating function which after hybridization alkylates the target sequence. ODNs adapted for alkylating single-stranded RNA, such as mRNA, are complementary to the target sequence in the Watson Crick sense. ODNs adapted for alkylating double-stranded DNA have at least two alkylating functions and are complementary to the target sequence in the Hoogsteen or reverse Hoogsteen sense. With these ODNs both strands of the target sequence are alkylated. A third class of ODNs have at least approx. 26 **nucleotide** units in a continuous sequence which are complementary to the target sequence of double-stranded DNA, and the alkylating function is covalently attached to a **nucleotide** unit in the continuous sequence. Alkylation or **crosslinking** with this class of ODNs occurs in the presence of a recombinase enzyme.
- ST **oligonucleotide** deriv alkylating **crosslinking** agent
gene; mapping gene **oligonucleotide** deriv alkylating
crosslinking; therapy gene **oligonucleotide** deriv
alkylating **crosslinking**
- IT Enzymes, uses
RL: CAT (Catalyst use); USES (Uses)
(DNA-recombining, in recombinase presence; **oligonucleotide**
derivs. prepn. for target **nucleic** acid alkylation and
crosslinking, gene mapping, and gene therapy)
- IT **Oligonucleotides**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT
(Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST
(Analytical study); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(derivs.; **oligonucleotide** derivs. prepn. for target
nucleic acid alkylation and **crosslinking**, gene
mapping, and gene therapy)
- IT DNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(double-stranded; **oligonucleotide** derivs. prepn. for target
nucleic acid alkylation and **crosslinking**, gene
mapping, and gene therapy)
- IT **Oligonucleotides**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT
(Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST
(Analytical study); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(haloacylamidoalkyl derivs.; **oligonucleotide** derivs. prepn.
for target **nucleic** acid alkylation and **crosslinking**
, gene mapping, and gene therapy)
- IT Alkylating agents, biological
Crosslinking agents
Gene therapy
Genetic mapping
(**oligonucleotide** derivs. prepn. for target **nucleic**
acid alkylation and **crosslinking**, gene mapping, and gene
therapy)
- IT mRNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

- (**oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT Probes (**nucleic acid**)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT Gene
(regulation, inhibition; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT DNA
RNA
RL: ANT (Analyte); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(single-stranded; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 123265-52-1D, **oligonucleotide** derivs.
186696-57-1D, **oligonucleotide** derivs.
186696-58-2D, **oligonucleotide** derivs.
186696-59-3D, **oligonucleotide** derivs.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 161601-18-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with iododeoxyuridine; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 5612-13-5P, 6-(Tritylamino)caproic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with malononitrile or cyanoacetamide; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 161601-17-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with **oligonucleotide** salts; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 129357-70-6P 129357-73-9P 129357-74-0P 129357-75-1P 129357-76-2P
137823-46-2P 142685-25-4P 161601-19-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 129357-72-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**,

- gene mapping, and gene therapy)
- IT 134140-85-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn.; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 134141-36-9P 137823-47-3P 161601-20-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn.; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 76-83-5, Trityl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with aminocaproic acid; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 3601-89-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with carbonitrile deriv.; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 14396-90-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with iododeoxyuridine; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 72040-63-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with **nucleotide** deriv.; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 54-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with phthalimido-butyne or (trifluoroacetamidoethoxy)propyne; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 14036-06-7, Diethoxymethyl acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyrazole carbonitrile deriv.; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 407-25-0, Trifluoroacetic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetrafluorophenol; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 305-03-3DP, Chlorambucil, **oligonucleotide** derivs.
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(reaction with tetrafluorophenyl trifluoroacetate; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)
- IT 305-03-3, Chlorambucil
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetrafluorophenyl trifluoroacetate; **oligonucleotide** derivs. prepn. for target **nucleic acid** alkylation and **crosslinking**, gene mapping, and gene therapy)

- IT 769-39-1, 2,3,5,6-Tetrafluorophenol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with trifluoroacetic acid; **oligonucleotide** derivs.
 prepn. for target **nucleic** acid alkylation and
crosslinking, gene mapping, and gene therapy)
- IT 109-77-3, Malononitrile
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with tritylamino caproic acid; **oligonucleotide**
 derivs. prepn. for target **nucleic** acid alkylation and
crosslinking, gene mapping, and gene therapy)
- IT 60-32-2, 6-Aminocaproic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tritylation; **oligonucleotide** derivs. prepn. for target
nucleic acid alkylation and **crosslinking**, gene
 mapping, and gene therapy)

L184 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:409259 HCAPLUS

DN 115:9259

TI Preparation of **crosslinking oligonucleotides** as
nucleic acid hybridization probes

IN **Petrie, Charles R.; Meyer, Richard B.; Tabone,**
John C.; Hurst, Gerald D.

PA Microprobe Corp., USA

SO PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H021-00

ICS C12Q001-68; C12Q001-70; G01N033-53

CC 33-9 (Carbohydrates)

Section cross-reference(s): 9

FAN.CNT 8

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|--------------|-----------------|--------------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 9014353 | A1 | 19901129 | WO 1990-US2740 | 19900515 |
| | W: CA, JP | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE | | | | |
| | EP 472648 | A1 | 19920304 | EP 1990-908844 | 19900515 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE | | | | |
| | JP 04507402 | T2 | 19921224 | JP 1990-508242 | 19900515 |
| | US 5824796 | A | 19981020 | US 1994-334490 | 19941104 <-- |
| PRAI | US 1989-353857 | A | 19890518 | | |
| | US 1988-250474 | B2 | 19880928 <-- | | |
| | WO 1990-US2740 | W | 19900515 | | |
| | US 1993-49807 | B1 | 19930420 | | |

OS MARPAT 115:9259

AB R1-B-(CH2)q-Yr-(CH2)m-A1 [R1 = H, sugar (analog) moiety optionally contg.
 Q1, Q2, Q3, P, etc.; Q1 = OH, OP(O)(OH)2, OP(O)(OH)OP(O)(OH)2; Q2 = O, S;
 Q3 = CH2R2, SR2, OR2, NR2R3; R2, R3 = H, alkyl; B = **nucleic** acid
 base or an analog thereof; Y = functional linking group; m, q = 0, 1-8
 integer; r = 0, 1; A1 = leaving group], useful as **nucleic** acid
 hybridization probes and therefore useful for diagnosis of diseases, were
 prepd. Reaction of 5-iodo-2'-deoxyuridine in DMF with
 4-phthalimido-1-butyne in the presence of (Ph3P)4Pd and Et3N at 60.degree.
 for 3 h gave 5-(4-phthalimido-1-butyne-1-yl)-2'-deoxyuridine, whose
 hydrogenation over Raney Ni gave 5-(4-phthalimidobutyl)-2'-deoxyuridine.
 5-[3-(Trifluoroacetamido)propyl]-2'-deoxyuridine was prepd. similarly and
 converted according to known methods into 5'-O-(dimethoxytrityl)-2'-
 deoxyuridine-3'-(N,N-diisopropyl)phosphoramidite cyanoethyl ester, which
 was used in the automated synthesis of 3'-CT TCC U1TG TAG CTG-5' [I; U1 =
 5-(3-aminopropyl)-2'-deoxyuridine residue]. This was reacted with
 N-(iodoacetoxy)succinimide to give II [U1 = 5-(3-iodoacetamidopropyl)-2'-

uridine residue], whose **crosslinking** to a 30-mer **oligonucleotide** derived from human papillomavirus (HPV) was evaluated.

- ST **crosslinking oligonucleotide** prepn; **nucleic acid** hybridization probe
- IT **Nucleic acid** hybridization
(probes, **crosslinking oligonucleotides** for)
- IT Diagnosis
(agents, **nucleic acid** hybridization probes in, **crosslinking oligonucleotides** as)
- IT **Nucleotides**, polymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, **crosslinking**, prepn. of, as probes for **nucleic acid** hybridization)
- IT 14396-90-8
RL: RCT (Reactant)
(alkylation by, of iododeoxyuridine)
- IT 54-42-2, 5-Iodo-2'-deoxyuridine
RL: RCT (Reactant)
(alkynylation of)
- IT **123265-52-1P 134140-85-5P 134141-36-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrogenation of)
- IT 134090-60-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with (iodoacetoxy)succinimide)
- IT 134090-62-3P 134090-64-5P 134090-67-8P 134090-68-9P 134090-69-0P
134374-31-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as probe for **nucleic acid** hybridization)
- IT 134090-61-2P 134140-87-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for automated synthesis of **oligonucleotides**)
- IT 134090-63-4P 134374-27-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for **nucleic acid** hybridization probe)
- IT 134140-86-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., for automated synthesis of **oligonucleotides**)
- IT **134158-63-7**
RL: RCT (Reactant)
(reaction of, with (iodoacetoxy)succinimide)
- IT 39028-27-8, N-Hydroxysuccinimide iodoacetate 42014-52-8
RL: RCT (Reactant)
(reaction of, with deoxyuridine deriv.)

L184 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:409258 HCAPLUS

DN 115:9258

TI Preparation of single stranded labelled oligonucleotides and reactive monomers

IN Ruth, Jerry L.

PA Syngene, inc., USA

SO U.S., 23 pp. Cont.-in-part of U.S. Ser. No. 617,094, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07H019-073

ICS C07H019-10; C07H019-173; C07H019-20

NCL 536027000

CC 33-9 (Carbohydrates)

Section cross-reference(s): 6, 9

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|--------------|-----------------|--------------|
| PI | US 4948882 | A | 19900814 | US 1987-46133 | 19870504 <-- |
| | US 5541313 | A | 19960730 | US 1994-336500 | 19941109 <-- |
| | US 5668266 | A | 19970916 | US 1995-439860 | 19950512 <-- |
| | US 5817786 | A | 19981006 | US 1997-814289 | 19970310 <-- |
| PRAI | US 1983-468498 | | 19830222 <-- | | |
| | US 1984-617094 | | 19840222 <-- | | |
| | US 1987-46133 | | 19870504 <-- | | |
| | US 1990-505032 | | 19900427 | | |
| | US 1994-288337 | | 19940810 | | |
| | US 1994-336500 | | 19941109 | | |
| | US 1995-484028 | | 19950607 | | |

OS MARPAT 115:9258

GI For diagram(s), see printed CA Issue.

AB The title compds. [I; B = pyrimidine or purine residue; R = linker attached to a blocking group, a detectable label e.g., residue of fluorescein or luminol or its derivs., or a solid support; when R4 = blocking group, then R5 = reactive phosphorus-contg. group or H if the 5'-OH group of the 5'-terminal nucleotide of a growing oligonucleotide contains a reactive phosphorus-contg. group; when R5 = blocking group, then R4 = reactive phosphorus-contg. group or H if the 3'-OH group of the 3'-terminal nucleotide of a growing oligonucleotide contains a reactive phosphorus-contg. group], useful for detection or identification of DNA by hybridization, are prepd. 5-[3-(Trifluoroacetamido)propenyl]-2'-deoxyuridine (prepn. given) was 5'-tritylated with dimethoxytrityl chloride and then hydrogenated to give 5'-dimethoxytrityl-5-[3-(trifluoroacetamido)propyl]-2'-deoxyuridine, which was condensed with MeOPCl₂ to give 5'-dimethoxytrityl-5-[3-(trifluoroacetamido)propyl]-2'-deoxyuridine 3'-[methyl phosphoromonochloridite]. This was then incorporated into a pentadecanucleotide [II; Um = 5-(3-aminopropyl)uracil residue]. II [Um = 5-[2-[(7-aminoheptyl)carbamoyl]vinyl]uracil residue] in an aq. Na borate or Na carbonate buffer contg. NaCl was reacted with fluorescein isothiocyanate at 4-25.degree. overnight to give II [Um = Q, Q1 = fluorescein residue]. Conjugation of the prepd. I with alk. phosphatase is also demonstrated.

ST nucleotide **reporter group** prepn; labeled nucleotide
DNA hybridization probe

IT Nucleic acid hybridization
(probes for, **reporter group**-contg.
oligodeoxyribonucleotides for)

IT Nucleotides, polymers
RL: SPN (Synthetic preparation); PREP (Preparation)
(oligo-, deoxyribo-, labeled, prepn. of, as DNA hybridization probes)

IT 407-25-0
RL: RCT (Reactant)
(acylation by, of adenosine deriv.)

IT 93-97-0, Benzoic anhydride
RL: RCT (Reactant)
(acylation by, of cytidine deriv.)

IT 96102-29-3 96102-32-8
RL: RCT (Reactant)
(acylation of)

IT 383-65-3, N-Allyltrifluoroacetamide
RL: RCT (Reactant)
(alkenylation by, of uridine deriv.)

IT 65505-76-2 65523-09-3
RL: RCT (Reactant)
(alkenylation of)

IT 70-34-8, 1-Fluoro-2,4-dinitrobenzene
RL: RCT (Reactant)
(condensation of, with [(amino)hexyl]amino]adenine-contg.
oligonucleotide)

- IT 74855-51-9 78635-95-7 78635-96-8 78635-97-9 96102-35-1
134128-78-2
RL: RCT (Reactant)
(condensation of, with nucleoside phosphites in prepn. of
oligonucleotides)
- IT 27072-45-3, Fluorescein isothiocyanate 66612-29-1
RL: RCT (Reactant)
(condensation of, with oligonucleotide)
- IT 3279-26-3, Methyl phosphorodichloridite 89992-70-1 134128-79-3
RL: RCT (Reactant)
(condensation of, with uridine deriv.)
- IT 96102-36-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with fluorodinitrobenzene)
- IT 96102-22-6P 96102-24-8P 96102-25-9P 96102-26-0P
96102-28-2P 96102-31-7P 96102-34-0P 96102-35-1P 106857-10-7P
134128-80-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of oligonucleotides with
reporter groups)
- IT 96102-30-6P 96102-33-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and tritylation of)
- IT 9001-78-9DP, conjugate with **reporter group**-contg.
nucleotide
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- IT 27072-45-3DP, conjugate with oligonucleotide 96118-77-3DP,
fluoresceinaminocarbonyl deriv. 134090-88-3P 134090-90-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as DNA hybridization probe)
- IT 96118-77-3P 96476-83-4P 134090-70-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in prepn. of labeled oligonucleotide DNA hybridization
probes)
- IT 40615-36-9
RL: RCT (Reactant)
(tritylation by, of nucleoside derivs.)
- L184 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:631607 HCAPLUS
DN 107:231607
TI Base dynamics of nitroxide-labeled thymidine analogs incorporated into
(dA-dT)_n by DNA polymerase I from E. coli
AU Pauly, Gary T.; Thomas, Ingrid E.; Bobst, Albert M.
CS Dep. Chem., Univ. Cincinnati, Cincinnati, OH, 45221, USA
SO Biochemistry (1987), 26(23), 7304-10
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
CC 6-2 (General Biochemistry)
Section cross-reference(s): 7, 9
AB Nitroxide-labeled thymidine substrates (dL) for Escherichia coli DNA
polymerase I (pol I) were used to synthesize spin-labeled alternating
double-stranded copolymers with (dA-dT)_n as a template. All dL substrates
use an alkane or alkene tether substituted into the 5-position of the
pyrimidine ring to link a 5- or 6-membered ring nitroxide to the
pyrimidine base. The kinetics of dL incorporation show some tether
dependence with respect to tether length and tether geometry. The ESR
spectra of (dA-dT, dL)_n duplexes directly formed by polymn. with pol I are
compared with the ESR spectra of (dA)_n(dT, dL)_n duplexes, which are
obtained after annealing of nitroxide-labeled single strands with
complementary unlabeled single strands. The ESR spectra indicate that

nitroxide-labeled analogs with tethers short enough to let the nitroxide ring reside in the major groove are excellent **reporter groups** for monitoring hybridization. A small difference between the ESR line shapes of the alternating duplexes (dA-dT,dL) n and the homopolymer duplexes (dA)n(dT,dL)n contg. the same dL is detectable, suggesting the presence of subtle differences in the base dynamics between both systems. Computer simulation of the ESR spectra of the (dA-dT,dL)n duplexes was successful with the same motional model reported earlier. The thymidine motion arising from tilting and torsion of base pairs and base twisting in (dA-dT)n is similar to that in (dA)n(dT)n and is of the order of 4 ns.

- ST thymidine nitroxide label polynucleotide base dynamics; DNA polymerase thymidine nitroxide label
- IT Nucleic acid bases
RL: PRP (Properties)
(dynamics of, in polynucleotides, nitroxide-labeled thymidine analogs as probes of)
- IT Conformation and Conformers
(of nucleic acid bases, in polynucleotides, dynamics of, nitroxide-labeled thymidine analogs as probes of)
- IT 9012-90-2
RL: BIOL (Biological study)
(I, thymidine nitroxide analog-contg. DNAs prepn. with, for base dynamics study)
- IT 111085-67-7 111186-71-1
RL: BIOL (Biological study)
(base dynamics of nitroxide-labeled thymidine analog in)
- IT 111085-69-9P 111112-20-0P 111112-32-4P 111186-73-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(double-stranded, prepn. and base dynamics of nitroxide-labeled thymidine analogs in)
- IT 50-89-5D, Thymidine, nitroxide-labeled derivs. 111060-17-4
111060-18-5 111085-66-6 111138-82-0
RL: RCT (Reactant)
(polymn. of, with DNA polymerase I, for use as probe of base dynamics in polynucleotides)
- IT 111085-68-8P 111186-72-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and base dynamics of nitroxide-labeled thymidine analogs in)

L184 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1985:204247 HCAPLUS

DN 102:204247

TI Defined sequence single strand oligonucleotides incorporating **reporter groups**, and nucleosides useful in such synthesis

IN Ruth, Jerry L.

PA Molecular Biosystems, Inc., USA

SO PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DT Patent

LA English

IC C07H017-00; C07H019-06; C07H015-12; C12Q001-68

CC 33-10 (Carbohydrates)

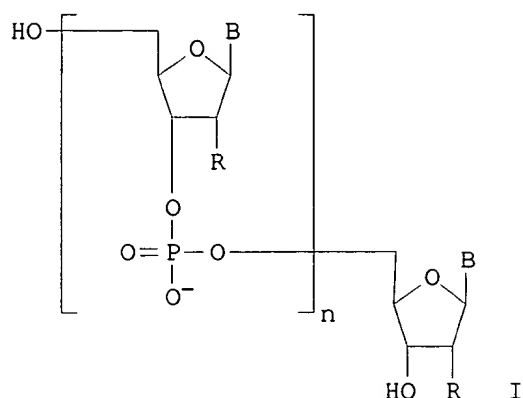
Section cross-reference(s): 6, 9

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|----------------------------|------|----------|-----------------|--------------|
| PI | WO 8403285 | A1 | 19840830 | WO 1984-US279 | 19840222 <-- |
| | W: AU, DK, JP, NO, US | | | | |
| | RW: CH, DE, FR, GB, NL, SE | | | | |
| | AU 8428139 | A1 | 19840910 | AU 1984-28139 | 19840222 <-- |
| | AU 596068 | B2 | 19900426 | | |

| | | | | |
|-------------------------------|----|----------|----------------|--------------|
| JP 60500717 | T2 | 19850403 | JP 1984-501526 | 19840222 <-- |
| JP 03059914 | B4 | 19910912 | | |
| EP 135587 | A1 | 19850403 | EP 1984-901462 | 19840222 <-- |
| EP 135587 | B1 | 19900502 | | |
| R: CH, DE, FR, GB, LI, NL, SE | | | | |
| CA 1231650 | A1 | 19880119 | CA 1984-460489 | 19840807 <-- |
| NO 8404196 | A | 19841019 | NO 1984-4196 | 19841019 <-- |
| NO 170890 | B | 19920914 | | |
| NO 170890 | C | 19921223 | | |
| DK 8405021 | A | 19841219 | DK 1984-5021 | 19841019 <-- |
| JP 03086897 | A2 | 19910411 | JP 1990-197582 | 19900723 <-- |
| JP 2542453 | B2 | 19961009 | | |
| PRAI US 1983-468498 | | 19830222 | <-- | |
| WO 1983-US254 | | 19830222 | <-- | |
| WO 1984-US279 | | 19840222 | <-- | |

GI



- AB Defined sequence oligonucleotides I ($n = 1-199$; $R = H, OH$; B is any of the naturally occurring purine or pyrimidine base; the nucleotide units having naturally occurring bases are independently intermixed with one or more nucleotide units having modified bases Bm contg. the **reporter groups**) and the nucleosides useful in their synthesis were prepd. The oligonucleotides with the **reporter groups** are useful in the identification, localization and detection of complementary nucleic acid sequences of interest in cellular or cell-free systems (no data). The oligonucleotides were prepd. by coupling reaction of the appropriate units on a solid support. Thus, 5-(chloromercuri)-2'-deoxyuridine was treated with N-(7-trifluoroacetylaminohexyl)acrylamide in MeOH in the presence of Li tetrachloropalladate to give 5-[N-trifluoroacetylaminohexyl]-1-acrylamido-2'-deoxyuridine. The latter was used in the synthesis of a pentadecadeoxynucleotide in which 5 nucleotides had 5-[N-(7-aminoheptyl)-1-acrylamido]uracil as the modified base. The pentadecadeoxynucleotide was treated with fluorescein isothiocyanate to give the fluoresceinated oligodeoxynucleotide.
- ST oligonucleotide **reporter group**; nucleotide oligo **reporter group**; fluoresceinated deoxyoligonucleotide; nucleoside modified purine pyrimidine
- IT Nucleosides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, for synthesis of oligonucleotides incorporating **reporter groups**)
- IT Nucleotides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (oligo-, **reporter group**-contg., prepn. of)
- IT 15525-45-8

RL: CAT (Catalyst use); USES (Uses)
(catalysts, for coupling of (chloromercuri)deoxyuridine with
allyltrifluoroacetamide)

IT 96102-23-7
RL: RCT (Reactant)
(coupling of, with (chloromercuri)deoxyuridine)

IT 383-65-3
RL: RCT (Reactant)
(coupling of, with (chloromercuri)deoxyuridine)

IT 65523-09-3
RL: RCT (Reactant)
(coupling of, with allyltrifluoroacetamide)

IT 65505-76-2
RL: RCT (Reactant)
(coupling of, with allyltrifluoroacetamide)

IT 74855-51-9 78635-95-7 78635-96-8 78635-97-9 96280-61-4
RL: RCT (Reactant)
(nucleotide coupling reaction of, in synthesis of oligonucleotides
incorporating **reporter groups**)

IT 96102-30-6P 96102-33-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dimethoxytritylation of)

IT 96102-26-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphorylation of, with methyl phosphodichloridate)

IT 96118-77-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with fluorescein isothiocyanate)

IT 96102-36-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with fluorodinitrobenzene)

IT 96230-55-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with isoluminol deriv.)

IT 96102-27-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and N-benzoylation of)

IT 96476-83-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 96102-22-6P 96102-24-8P 96102-25-9P 96102-28-2P
96102-31-7P 96102-34-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in synthesis of oligonucleotides incorporating
reporter groups)

IT 96102-35-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., in synthesis of oligonucleotides incorporating
reporter groups)

IT 27072-45-3
RL: RCT (Reactant)
(reaction of, with amino group-substituted oligonucleotides)

IT 70-34-8
RL: RCT (Reactant)
(reaction of, with aminohexyl-substituted oligodeoxynucleotide)

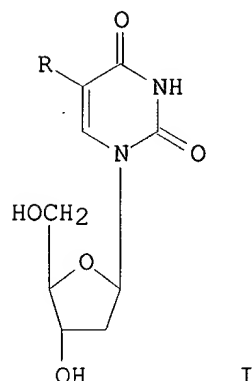
IT 66612-29-1
RL: RCT (Reactant)
(reaction of, with carboxyethenyl-substituted deoxyoligonucleotide)

IT 96102-32-8
RL: RCT (Reactant)
(trifluoroacetylation of)

IT 96102-29-3
RL: RCT (Reactant)

(N-benzoylation of)

L184 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 AN 1980:509555 HCAPLUS
 DN 93:109555
 TI Thymidine phosphorylase. Substrate specificity for 5-substituted 2'-deoxyuridines
 AU Nakayama, Chikao; Wataya, Yusuke; Meyer, Rich B., Jr.; Santi, Daniel V.; Saneyoshi, Mineo; Ueda, Tohru
 CS Dep. Pharm. Chem., Univ. California, San Francisco, CA, 94143, USA
 SO J. Med. Chem. (1980), 23(8), 962-4
 CODEN: JMCMAR; ISSN: 0022-2623
 DT Journal
 LA English
 CC 7-3 (Enzymes)
 Section cross-reference(s): 1
 GI



AB The title compds. I (R = halogen, Me, CF₃, CN, CHO, etc.) were evaluated as substrates of horse liver thymidine phosphorylase. An improved continuous spectrophotometric assay for phosphorolysis and transferase activities of the enzyme is described. I having electron-withdrawing 5-substituents at least the size of a Me group showed lower K_m, and in most cases, V_{max} values. Quant. structure-activity relations relating to catalytic efficiency for various substrates to a single variable, the inductive field const., are described.

ST thymidine phosphorylase specificity deoxyuridine analog; inductive field thymidine phosphorylase deoxyuridine

IT Linear free energy relationship
 (of deoxyuridines, as substrates for thymidine phosphorylase)

IT Michaelis constant
 (of thymidine phosphorylase)

IT Molecular structure-biological activity relationship
 (enzyme-affecting, of deoxyuridine analogs)

IT Linear free energy relationship
 (multiparameter, of deoxyuridine analogs as substrates of thymidine phosphorylase)

IT 50-89-5, biological studies 50-90-8 50-91-9 54-42-2
 59-14-3 70-00-8 73-39-2 4494-26-2
 5116-24-5 15176-29-1 26639-00-9
 74311-81-2
 RL: BIOL (Biological study)
 (as substrate for thymidine phosphorylase)

IT 9030-23-3

RL: BIOL (Biological study)

(substrate specificity of, for deoxyuridine analogs, QSAR in)

=> fil reg

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DICTIONARY FILE UPDATES: 8 JUL 2002 HIGHEST RN 437701-77-4

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

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conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d ide can tot l192

L192 ANSWER 1 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 186696-59-3 REGISTRY

CN Uridine, 5-[4-[(4-bromo-1-oxobutyl)amino]butyl]-2'-deoxy- (9CI) (CA INDEX NAME)

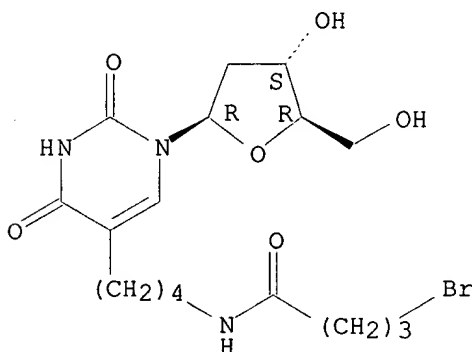
FS STEREOSEARCH

MF C17 H26 Br N3 O6

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:153646

L192 ANSWER 2 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 186696-58-2 REGISTRY

CN Uridine, 2'-deoxy-5-[4-[(iodoacetyl)amino]butyl]- (9CI) (CA INDEX NAME)

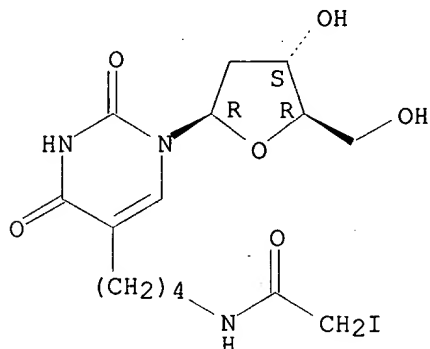
FS STEREOSEARCH

MF C15 H22 I N3 O6

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

L192 ANSWER 3 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 186696-57-1 REGISTRY

CN Uridine, 5-[3-[(4-bromo-1-oxobutyl)amino]propyl]-2'-deoxy- (9CI) (CA INDEX NAME)

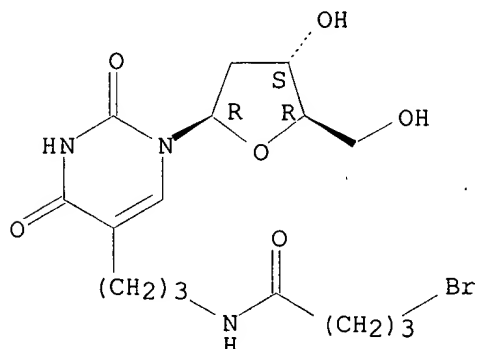
FS STEREOSEARCH

MF C16 H24 Br N3 O6

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

L192 ANSWER 4 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 171258-27-8 REGISTRY

CN Uridine, 5-[3-[[4-[4-[bis(2-chloroethyl)amino]phenyl]-1-oxobutyl]amino]propyl]-2'-deoxy- (9CI) (CA INDEX NAME)

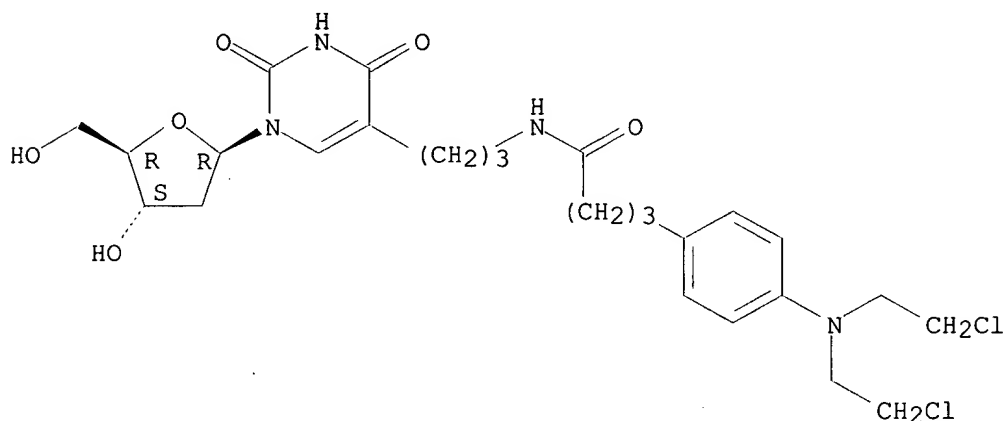
FS STEREOSEARCH

MF C26 H36 Cl2 N4 O6

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 133:306344

REFERENCE 2: 131:154471

REFERENCE 3: 124:308654

REFERENCE 4: 124:2498

L192 ANSWER 5 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 161601-20-3 REGISTRY

CN Uridine, 2'-deoxy-5-[3-[2-[(trifluoroacetyl)amino]ethoxy]propyl]- (9CI)
(CA INDEX NAME)

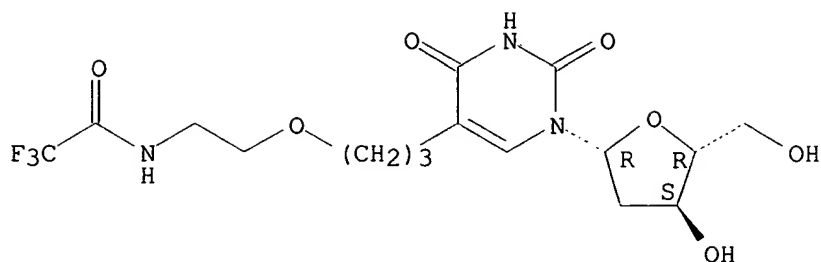
FS STEREOSEARCH

MF C16 H22 F3 N3 O7

SR CA

LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:330802

REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

L192 ANSWER 6 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 161601-19-0 REGISTRY

CN Uridine, 2'-deoxy-5-[3-[2-[(trifluoroacetyl)amino]ethoxy]-1-propynyl]-
(9CI) (CA INDEX NAME)

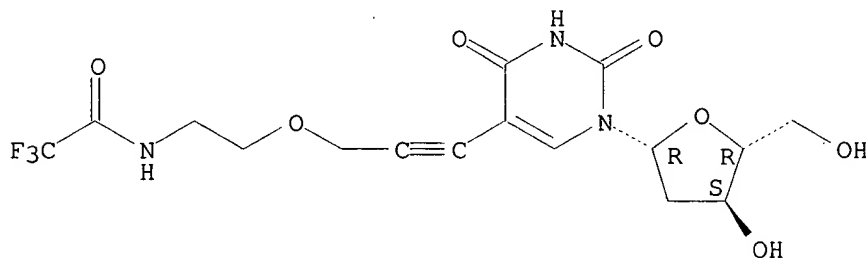
FS STEREOSEARCH

MF C16 H18 F3 N3 O7

SR CA

LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:330802

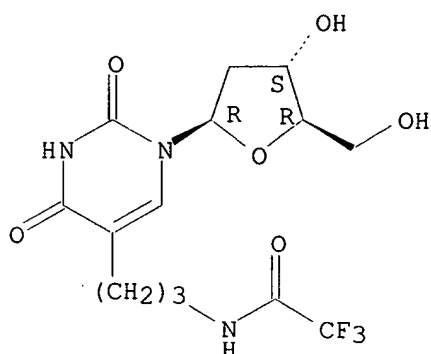
REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

L192 ANSWER 7 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 134158-63-7 REGISTRY
CN Uridine, 2'-deoxy-5-[3-[(trifluoroacetyl)amino]propyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C14 H18 F3 N3 O6
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

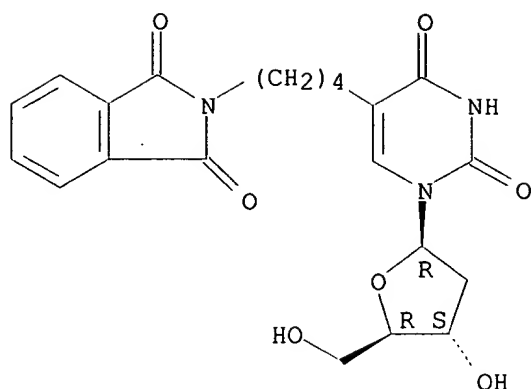
4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:73170
REFERENCE 2: 132:208083
REFERENCE 3: 126:199794
REFERENCE 4: 115:9259

L192 ANSWER 8 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 134141-36-9 REGISTRY
CN Uridine, 2'-deoxy-5-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)butyl]- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H23 N3 O7
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707

REFERENCE 2: 126:330802

REFERENCE 3: 126:153646

REFERENCE 4: 122:178406

REFERENCE 5: 120:127925

REFERENCE 6: 119:221156

REFERENCE 7: 115:9259

L192 ANSWER 9 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 134140-85-5 REGISTRY

CN Uridine, 2'-deoxy-5-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-1-butynyl]-
(9CI) (CA INDEX NAME)

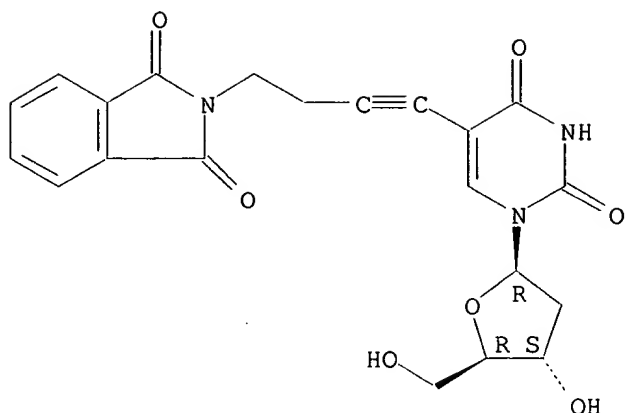
FS STEREOSEARCH

MF C21 H19 N3 O7

SR CA

LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:353707
REFERENCE 2: 126:330802
REFERENCE 3: 126:153646
REFERENCE 4: 122:178406
REFERENCE 5: 120:127925
REFERENCE 6: 119:221156
REFERENCE 7: 115:9259

L192 ANSWER 10 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 123265-52-1 REGISTRY

CN Uridine, 2'-deoxy-5-[3-[(iodoacetyl)amino]propyl]- (9CI) (CA INDEX NAME)

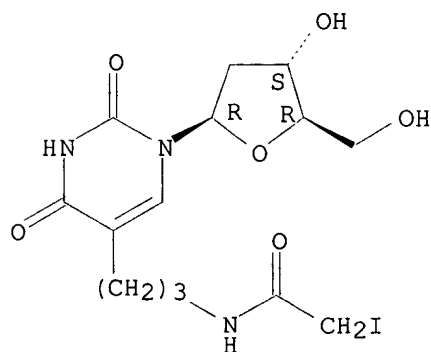
FS STEREOSEARCH

MF C14 H20 I N3 O6

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry.



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

4 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:153646

REFERENCE 2: 119:221156

REFERENCE 3: 115:9259

REFERENCE 4: 111:190574

L192 ANSWER 11 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **96102-24-8** REGISTRY

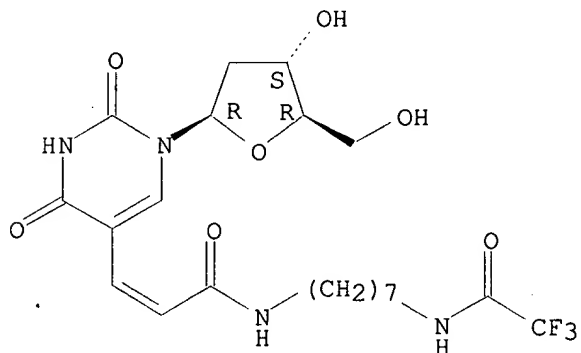
CN Uridine, 2'-deoxy-5-[3-oxo-3-[[7-[(trifluoroacetyl)amino]heptyl]amino]-1-propenyl]- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C21 H29 F3 N4 O7

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.

****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 115:9258

REFERENCE 2: 102:204247

L192 ANSWER 12 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **96102-22-6** REGISTRY

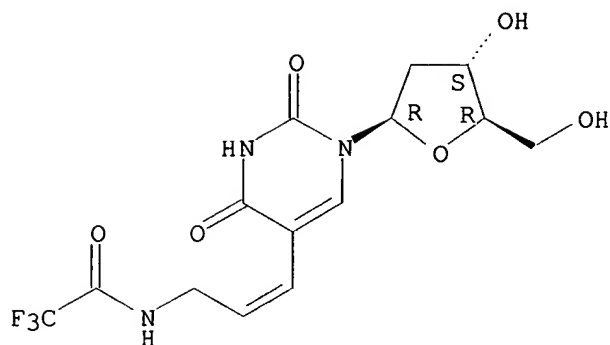
CN Uridine, 2'-deoxy-5-[3-[(trifluoroacetyl)amino]-1-propenyl]- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF **C14 H16 F3 N3 O6**

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:131133

REFERENCE 2: 133:204750

REFERENCE 3: 130:81787

REFERENCE 4: 117:186043

REFERENCE 5: 115:9258

REFERENCE 6: 113:111963

REFERENCE 7: 106:172474

REFERENCE 8: 106:172449

REFERENCE 9: 106:81222

REFERENCE 10: 106:46883

L192 ANSWER 13 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 74311-81-2 REGISTRY

CN Uridine, 2'-deoxy-5-(1-propenyl)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5-(1-Propenyl)-2'-deoxyuridine

FS STEREOSEARCH

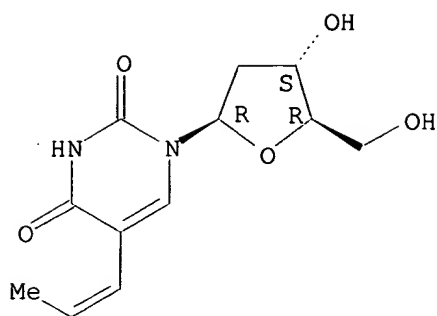
MF C12 H16 N2 O5

LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, TOXCENTER,
USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.

Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 115:41448
REFERENCE 2: 113:224123
REFERENCE 3: 110:128633
REFERENCE 4: 103:16283
REFERENCE 5: 98:191291
REFERENCE 6: 95:7706
REFERENCE 7: 93:109555

L192 ANSWER 14 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **26639-00-9** REGISTRY

CN Uridine, 5-cyano-2'-deoxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 5-Pyrimidinecarbonitrile, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-
1,2,3,4-tetrahydro-2,4-dioxo- (8CI)

OTHER NAMES:

CN 5-Cyano-2'-deoxyuridine

CN 5-Cyanodeoxyuridine

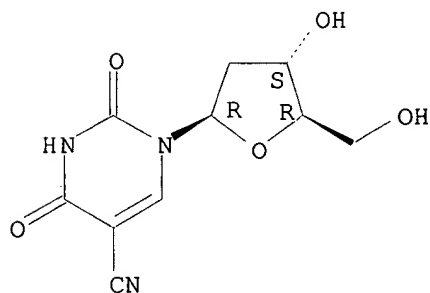
FS STEREOSEARCH

DR 56653-12-4

MF C10 H11 N3 O5

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, EMBASE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1967 TO DATE)
27 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:401971
REFERENCE 2: 136:179979
REFERENCE 3: 123:266
REFERENCE 4: 110:24209
REFERENCE 5: 104:28476
REFERENCE 6: 101:122468
REFERENCE 7: 100:188438
REFERENCE 8: 100:61328
REFERENCE 9: 98:209571
REFERENCE 10: 98:46574

L192 ANSWER 15 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 15176-29-1 REGISTRY

CN Uridine, 2'-deoxy-5-ethyl- (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN .beta.-5-Ethyl-2'-deoxyuridine

CN .beta.-5-Ethyldeoxyuridine

CN 2'-Deoxy-5-ethyluridine

CN 5-Ethyl-1-(2'-deoxy-.beta.-D-ribofuranosyl)uracil

CN 5-Ethyl-2'-deoxyuridine

CN 5-Ethyldeoxyuridine

CN Aedurid

CN Edoxudine

CN EDU

CN Epoxudine

FS STEREOSEARCH

DR 46895-01-6

MF C11 H16 N2 O5

CI COM

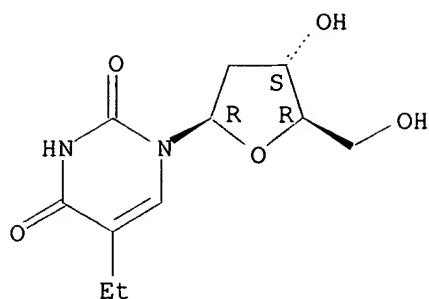
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU,
DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT,
PHAR, RTECS*, SPECINFO, TOXCENTER, USAN, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

264 REFERENCES IN FILE CA (1967 TO DATE)
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 264 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:272759

REFERENCE 2: 136:217007

REFERENCE 3: 136:64094

REFERENCE 4: 136:17266

REFERENCE 5: 135:376707

REFERENCE 6: 135:340189

REFERENCE 7: 135:205505

REFERENCE 8: 135:174643

REFERENCE 9: 135:116203

REFERENCE 10: 135:51041

L192 ANSWER 16 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **5116-24-5** REGISTRY

CN Thymidine, .alpha.-hydroxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Uridine, 2'-deoxy-5-(hydroxymethyl)- (6CI, 7CI, 8CI)

OTHER NAMES:

CN .alpha.-Hydroxythymidine

CN 2'-Deoxy-5-(hydroxymethyl)uridine

CN 2'-Desoxy-5-hydroxymethyluridine

CN 5-(Hydroxymethyl)-2'-desoxyuridine

CN 5-Hydroxymethyl-2'-deoxyuridine

CN 5-Hydroxymethyldeoxyuridine

FS STEREOSEARCH

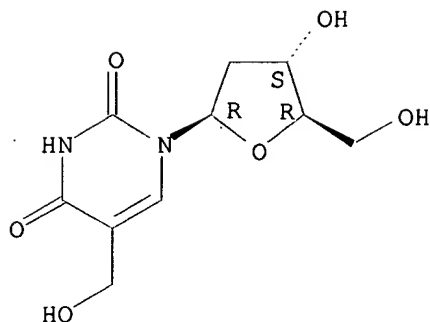
MF C10 H14 N2 O6

LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, EMBASE, MEDLINE, NIOSHTIC, RTECS*, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

157 REFERENCES IN FILE CA (1967 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 157 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:340083
 REFERENCE 2: 136:199541
 REFERENCE 3: 136:5251
 REFERENCE 4: 136:4440
 REFERENCE 5: 135:222687
 REFERENCE 6: 135:180209
 REFERENCE 7: 135:135424
 REFERENCE 8: 135:86583
 REFERENCE 9: 134:219160
 REFERENCE 10: 134:86488

L192 ANSWER 17 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN **4494-26-2** REGISTRY

CN Uridine, 2'-deoxy-5-formyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 5-Pyrimidinecarboxaldehyde, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo- (7CI, 8CI)

CN 5-Pyrimidinecarboxaldehyde, 1-(2-deoxy-.beta.-D-ribofuranosyl)-1,2,3,4-tetrahydro-2,4-dioxo- (6CI)

OTHER NAMES:

CN 2'-Deoxy-5-formyluridine

CN 5-Formyl-2'-deoxyuridine

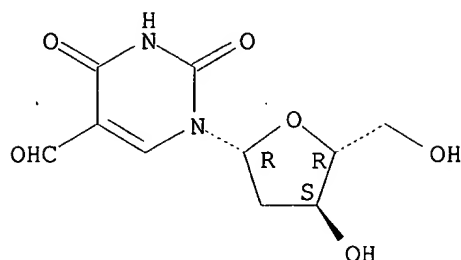
FS STEREOSEARCH

MF C10 H12 N2 O6

LC STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, EMBASE, MEDLINE, RTECS*, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

68 REFERENCES IN FILE CA (1967 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 68 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:242869

REFERENCE 2: 135:315102

REFERENCE 3: 135:86583

REFERENCE 4: 135:15353

REFERENCE 5: 134:362886

REFERENCE 6: 134:321927

REFERENCE 7: 134:2074

REFERENCE 8: 133:146438

REFERENCE 9: 133:129502

REFERENCE 10: 133:116791

L192 ANSWER 18 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 73-39-2 REGISTRY

CN Uridine, 2'-deoxy-5-(2-propenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Uridine, 5-allyl-2'-deoxy- (7CI, 8CI)

OTHER NAMES:

CN 5-Allyl-2'-deoxyuridine

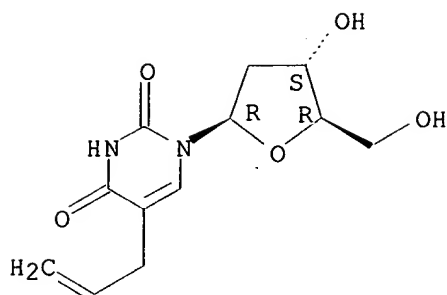
CN 5-Allyldeoxyuridine

FS STEREOSEARCH

MF C12 H16 N2 O5

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, EMBASE,
 MEDLINE, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

22 REFERENCES IN FILE CA (1967 TO DATE)
 22 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:144636
 REFERENCE 2: 136:37859
 REFERENCE 3: 133:129502
 REFERENCE 4: 127:205817
 REFERENCE 5: 126:182770
 REFERENCE 6: 121:124571
 REFERENCE 7: 116:6906
 REFERENCE 8: 106:66985
 REFERENCE 9: 103:196357
 REFERENCE 10: 101:143556

L192 ANSWER 19 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 70-00-8 REGISTRY

CN Thymidine, .alpha.,.alpha.,.alpha.-trifluoro- (8CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Uridine, 2'-deoxy-5-(trifluoromethyl)- (7CI)

OTHER NAMES:

CN 2'-Deoxy-5-(trifluoromethyl)uridine

CN 5-(Trifluoromethyl)-2'-deoxyuridine

CN 5-(Trifluoromethyl)deoxyuridine

CN 5-Trifluoromethyl-2'-deoxy-.beta.-uridine

CN 5-Trifluorothymidine

CN Trifluorothymidine

CN Trifluridine

CN Viroptic

FS STEREOSEARCH

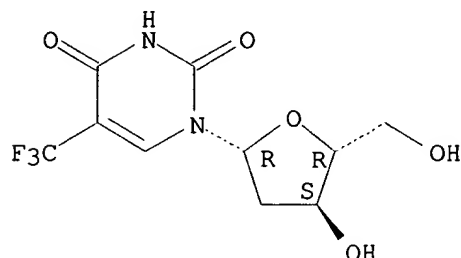
MF C10 H11 F3 N2 O5

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PHAR, PROMT, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPATFULL, VETU

(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

391 REFERENCES IN FILE CA (1967 TO DATE)
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
391 REFERENCES IN FILE CAPLUS (1967 TO DATE)
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:401971
REFERENCE 2: 136:345786
REFERENCE 3: 136:252482
REFERENCE 4: 136:123678
REFERENCE 5: 136:74472
REFERENCE 6: 136:64094
REFERENCE 7: 136:37866
REFERENCE 8: 136:17266
REFERENCE 9: 136:16468
REFERENCE 10: 135:376707

L192 ANSWER 20 OF 20 REGISTRY COPYRIGHT 2002 ACS

RN 50-89-5 REGISTRY

CN Thymidine (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN .beta.-D-Ribofuranoside, thymine-1 2-deoxy-

CN 1-(2-Deoxy-.beta.-D-erythro-pentofuranosyl)-5-methyl-2,4(1H,3H)-
pyrimidinedione

CN 2'-Deoxythymidine

CN 2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-5-
methyl-

CN 5-Methyl-2'-deoxyuridine

CN 5-Methyldeoxyuridine

CN Deoxyribothymidine

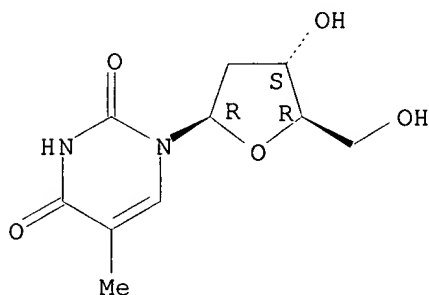
CN Deoxythymidine

CN dT

CN DThyd

CN Thymidin
 CN Thymine 2-desoxyriboside
 CN Thymine deoxyriboside
 CN Uridine, 2'-deoxy-5-methyl-
 AR 157049-39-3, 157049-40-6
 FS STEREOSEARCH
 DR 35902-13-7
 MF C10 H14 N2 O5
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE,
 GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
 NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE,
 TOXCENTER, USPATFULL, VETU
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6335 REFERENCES IN FILE CA (1967 TO DATE)
 338 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 6337 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 137:20545
 REFERENCE 2: 137:17755
 REFERENCE 3: 137:1836
 REFERENCE 4: 136:401970
 REFERENCE 5: 136:396666
 REFERENCE 6: 136:395954
 REFERENCE 7: 136:386335
 REFERENCE 8: 136:386330
 REFERENCE 9: 136:385047
 REFERENCE 10: 136:384397

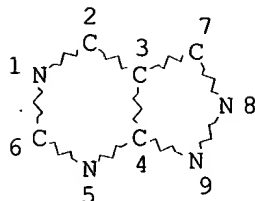
=>

=>

=>

=> d sta que 148

L43 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

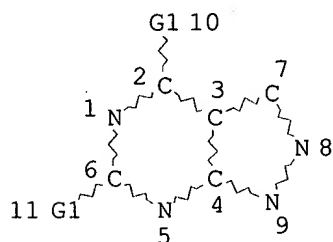
RSPEC 7

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L45 11393 SEA FILE=REGISTRY SSS FUL L43

L46 STR

O~Ak
@12 13S~Ak
@14 15N~O
@16 17N~O~Ak
@18 19 20N~N
@21 22N~Ak~N
@23 24 25

VAR G1=H/O/12/S/14/16/18/N/21/23

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 7

CONNECT IS M1 RC AT 9

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 7

NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L48 2557 SEA FILE=REGISTRY SUB=L45 CSS FUL L46

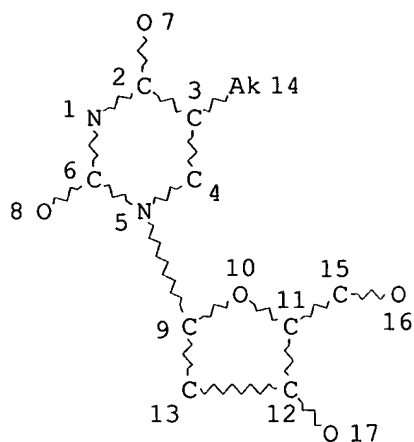
100.0% PROCESSED 11393 ITERATIONS

2557 ANSWERS

SEARCH TIME: 00.00.01

=> d sta que 1166

L161 STR



NODE ATTRIBUTES:

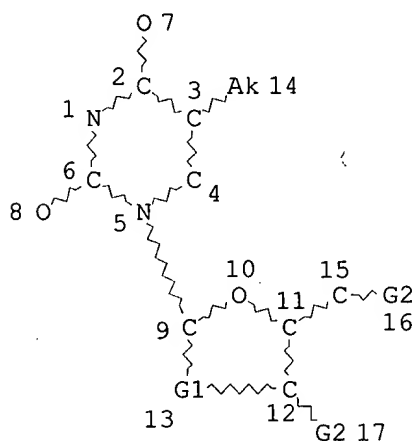
CONNECT IS M1 RC AT 13
 CONNECT IS M1 RC AT 14
 CONNECT IS M1 RC AT 16
 CONNECT IS M1 RC AT 17
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

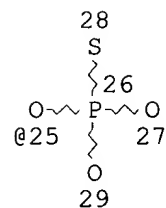
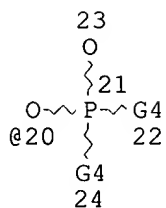
RSPEC 5
 NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L163 37623 SEA FILE=REGISTRY CSS FUL L161
 L164 STR



C~G2
 @18 19



O~Ak
 @30 31

VAR G1=C/18
 VAR G2=O/30/20/25
 VAR G4=O/30

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 14

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 5
NUMBER OF NODES IS 31

STEREO ATTRIBUTES: NONE

L166 2269 SEA FILE=REGISTRY SUB=L163 CSS FUL L164

100.0% PROCESSED 37623 ITERATIONS
SEARCH TIME: 00.00.17

2269 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 10:56:25 ON 09 JUL 2002)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 10:56:36 ON 09 JUL 2002

E PETRIE C/AU
L1 20 S E3,E6,E7,E11-E13
E MEYER R/AU
L2 408 S E3,E7
L3 209 S E102-E106,E110
E TBAONE J/AU
E TABONE J/AU
L4 55 S E3-E6
E HURST G/AU
L5 14 S E3,E7,E8
L6 12 S E33-E35
L7 707 S L1-L6
L8 79 S L7 AND OLIGO?
L9 138 S L7 AND (NUCLEIC OR ?NUCLEO?)
L10 138 S L8,L9
L11 25 S L7 AND (?CROSSLINK? OR ?CROSS LINK?)
L12 23 S L11 AND L10
L13 12 S L7 AND 3/SC,SX AND L11
L14 23 S L12,L13
E CROSSLINK/CT
E E13+ALL
L15 54748 S E2+NT
L16 45247 S E13+NT OR E14+NT OR E15+NT OR E16+NT OR E17+NT
L17 6 S L7 AND L16
L18 23 S L14,L17
E PETRIE C/AU
L19 67 S E3-E7,E10-E13
L20 7 S L19 AND (L15,L17 OR ?CROSSLINK? OR ?CROSS LINK?)
L21 6 S L18 AND L20
L22 1 S L20 NOT L21
L23 23 S L18,L21
L24 3 S L23 AND (3H OR 125I OR 35S OR 14C OR 32P OR H3 OR I125 OR S35
L25 2 S L23 AND REPORT?
L26 5 S L24,L25
L27 2 S (US5824796 OR US4890348)/PN
E US88-240474/AP,PRN
E US89-353857/AP,PRN
L28 5 S E4
E US93-049807/AP,PRN
L29 5 S E4
L30 5 S L28,L29
L31 5 S L30 AND L1-L30

L32 5 S L27,L31 AND L1-L30
L33 3 S L26 NOT L32
L34 8 S L32,L33
L35 16 S L23 NOT L34 .

FILE 'REGISTRY' ENTERED AT 11:36:25 ON 09 JUL 2002

FILE 'HCAPLUS' ENTERED AT 11:36:25 ON 09 JUL 2002
SET SMARTSELECT ON
L36 SEL L34 1- RN : 180 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 11:36:26 ON 09 JUL 2002
L37 180 S L36

FILE 'HCAPLUS' ENTERED AT 11:36:33 ON 09 JUL 2002
SET SMARTSELECT ON
L38 SEL L35 1- RN : 147 TERMS
SET SMARTSELECT OFF

FILE 'REGISTRY' ENTERED AT 11:36:34 ON 09 JUL 2002
L39 147 S L38
L40 269 S L37,L39
L41 7 S L40 AND N2C3-NCNC3/ES
L42 27 S L40 AND NCNC3/ES
L43 STR
L44 50 S L43
L45 11393 S L43 FUL
SAV L45 OWENS693/A TEMP
L46 STR L43
L47 50 S L46 CSS SAM SUB=L45
L48 2557 S L47 CSS FUL SUB=L45
SAV L48 OWENS693A/A TEMP
L49 71 S L48 AND I/ELS
L50 686 S L48 AND S/ELS
L51 0 S L50 AND (35S OR S35)
L52 110 S L48 AND P/ELS
L53 0 S L52 AND (32P OR P32)
L54 1 S L48 AND (14C# OR C14#)
L55 26 S L48 AND (3H OR H3)
L56 STR L46
L57 9 S L56 SAM SUB=L48
L58 225 S L56 FUL SUB=L48
L59 SCR 2039
L60 0 S L59 SAM SUB=L48
L61 4 S L59 FUL SUB=L48
E HYDROGEN, ION/CN
L62 3 S L48 AND (LABELED OR (D OR T)/ELS)
E IODINE, ION/CN
L63 1 S E116
E SULFUR, ION/CN
L64 1 S E144
E CARBON, ION/CN
E CARBON, ISOTOPE/CN
L65 1 S E31
E PHOSPHORUS/CN
E PHOSPHORUS, ISOTOPE/CN
L66 1 S E12
E HYDROGEN, ISOTOPE/CN
L67 1 S E6

FILE 'HCAPLUS' ENTERED AT 11:59:07 ON 09 JUL 2002
L68 2817 S L48

L69 1467 S L68 AND (PY<=1988 OR PRY<=1988 OR AY<=1988)
L70 1 S L69 AND L63-L67
L71 80 S L69 AND (3H OR H3 OR 125I OR I125 OR 35S OR S35 OR 14C OR C14
L72 15 S L7,L19 AND L68
L73 8 S L72 AND L69
L74 3 S L73 AND (LABEL? OR L71 OR ?CROSSLINK? OR ?CROSS LINK? OR REPO
L75 67 S L69 AND (LABEL? OR ?CROSSLINK? OR ?CROSS LINK? OR REPORT?(L)G
L76 5 S L69 AND GENET?/SC,SX
L77 340 S L69 AND (?OLIGO? OR ?NUCLEIC? OR ?NUCLEO?)
L78 341 S L76,L77
L79 88 S L58
L80 49 S L79 AND L69
L81 50 S L73,L80
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 12:14:53 ON 09 JUL 2002

L82 246 S E1-E247
L83 72 S L82 AND 46.150.18/RID
L84 174 S L82 NOT L83
L85 138 S L84 NOT (?CYAN? OR ?NITRIL?)/CNS
L86 119 S L85 NOT CARBOXIMID?
L87 118 S L86 NOT NITRO?
L88 115 S L87 NOT NCNC2-SC4/ES
L89 100 S L88 NOT CARBOTH?
L90 93 S L89 NOT BR/ELS
L91 87 S L90 NOT ETHANAMINE
L92 82 S L91 NOT CARBOXYLIC
L93 78 S L92 NOT ACETIC ACID
L94 30 S L93 AND (C11H15N5O5 OR C10H14N6O4 OR C12H17N5O5 OR C7H8N4S2 O
L95 4 S L94 AND C6H6N4S
L96 3 S L95 NOT 6014-06-8
L97 4 S L94 AND C6H6N4O
L98 1 S L97 AND 2942-47-4
L99 2 S L94 AND C11H14N4O5S
L100 1 S L99 AND 76690-46-5
L101 2 S L94 AND C11H15N5O5
L102 1 S L101 NOT 90914-39-9
L103 1 S L94 AND C7H8N4S2
L104 3 S L94 AND C10H13N5O5
L105 2 S L104 NOT 90914-38-8
L106 2 S L94 AND C6H6N4OS
L107 1 S L106 NOT 90914-36-6
L108 3 S L94 AND C10H13N5O5
L109 2 S L108 NOT 90914-38-8
L110 3 S L94 AND C10H14N6O4
L111 2 S L110 NOT 90914-44-6
L112 13 S L96,L98,L99,L102,L103,L105,L107,L109,L111
L113 17 S L94 NOT L112
L114 48 S L93 NOT L94
L115 77 S L85 NOT L112,L114
L116 8 S L115 AND (C7H10N6 OR C12H18N6O3 OR C6H15N OR C10H14N6O4 OR C1
L117 69 S L112,L114,L116

FILE 'HCAPLUS' ENTERED AT 13:32:14 ON 09 JUL 2002

L118 2401 S L117
L119 33 S L118 AND L81
L120 2 S L119 AND (?LABEL? OR ?FLUORES? OR REPORT?(L)GROUP? OR ?CROSSL
L121 38 S L73,L74,L119,L120
L122 20 S L121 AND L78
L123 18 S L121 NOT L122
L124 1 S L122 AND DIAZO/TI
L125 19 S L122 NOT L124

FILE 'HCAPLUS' ENTERED AT 13:38:35 ON 09 JUL 2002

L126 7 S L118 AND L7,L19
L127 479 S L118 AND (?OLIGO? OR GENET?/SC,SX,CW,BI OR ?NUCLEOT? OR ?NUCL
L128 206 S L118 AND (?LABEL? OR ?FLUORES? OR REPORT?(L)GROUP? OR ?CROSSL
L129 1382 S L118 AND (PY<=1988 OR PRY<=1998 OR AY<=1988)
L130 314 S L129 AND L127
L131 125 S L129 AND L128
L132 47 S L127 AND L128 AND L131
L133 2 S L132 AND L125
L134 45 S L132 NOT L125
L135 7 S L134 AND OLIGO?
L136 6 S L135 NOT 17/SC
L137 8 S L133,L136
L138 56 S L125,L134 NOT L137
L139 4 S L138 AND OLIGON?
L140 12 S L137,L139
L141 52 S L138 NOT L140
L142 23 S L141 AND NUCLE?/CW
L143 12 S L142 NOT (18/SC OR 9/SC OR METABOLISM/TI)
L144 11 S L142 NOT L143
SEL DN AN 10
L145 1 S L144 AND E248-E250
L146 25 S L140,L145,L143
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:49:46 ON 09 JUL 2002

L147 112 S E251-E362
L148 44 S L147 AND L117
L149 68 S L147 NOT L148

FILE 'HCAPLUS' ENTERED AT 13:51:19 ON 09 JUL 2002

FILE 'HCAPLUS' ENTERED AT 13:51:44 ON 09 JUL 2002

FILE 'REGISTRY' ENTERED AT 13:52:04 ON 09 JUL 2002

FILE 'HCAPLUS' ENTERED AT 13:52:39 ON 09 JUL 2002

L150 741 S L7,L19
L151 2 S L150 AND REPORT? GROUP?
L152 19 S L150 AND ?LABEL?
L153 34 S L150 AND (?FLUORES? OR DEUTER? OR TRITI?)
L154 48 S L151,L152,L153
L155 4 S L154 AND L68
L156 4 S L155 AND L1-L35,L68-L81,L118-L146,L150-L155
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:55:43 ON 09 JUL 2002

L157 11 S E363-E373
L158 8 S L157 NOT NCNC2-SC4/ES
L159 STR
L160 50 S L159 CSS SAM
L161 STR L159
L162 50 S L161 CSS SAM
L163 37623 S L161 CSS FUL
L164 STR L161
L165 41 S L164 CSS SAM SUB=L163
L166 2269 S L164 CSS FUL SUB=L163
SAV OWENS693B/A L166
DEL OWENS693B/A
SAV OWENS693B/A L166 TEMP

FILE 'HCAPLUS' ENTERED AT 14:04:57 ON 09 JUL 2002

L167 13125 S L166

L168 17 S L167 AND L150
L169 7703 S L167 AND (PY<=1988 OR PRY<=1988 OR AY<=1988)
L170 5 S L168 AND L169
L171 2375 S L169 AND (?LABEL? OR ?FLUORE? OR DEUTER? OR TRITIUM? OR 3H OR
L172 86 S L169 AND (?CROSSLINK? OR ?CROSS LINK?)
L173 5 S L15,L16 AND L171
L174 88 S L170,L172,L173
L175 25 S L174 AND ?OLIGON?
L176 78 S L174 AND (?NUCLEO? OR ?NUCLEIC?)
L177 7 S L174 AND GENET?/SC,SX,CW
L178 26 S L175,L177
L179 13 S L167 AND REPORT? GROUP?
L180 3 S L169 AND L179
L181 8 S L170,L180
L182 5 S L174 AND L181
L183 4 S L175,L176,L177 AND L181
L184 8 S L181-L183
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:09:16 ON 09 JUL 2002

L185 24 S E374-E397
L186 6 S L185 AND (C10H14N2O5 OR C11H16N2O5 OR C12H16N2O5 OR C14H18F3N
L187 2 S L185 AND NC4-C6/ES

FILE 'HCAPLUS' ENTERED AT 14:13:48 ON 09 JUL 2002
SEL HIT RN L170

FILE 'REGISTRY' ENTERED AT 14:14:09 ON 09 JUL 2002

L188 18 S E398-E415
L189 19 S L186,L187,L188

FILE 'HCAPLUS' ENTERED AT 14:14:52 ON 09 JUL 2002
SEL HIT RN L180

FILE 'REGISTRY' ENTERED AT 14:15:18 ON 09 JUL 2002

L190 7 S E416-E422
L191 3 S L190 NOT NC5/ES
L192 20 S L189,L191

FILE 'HCAPLUS' ENTERED AT 14:16:06 ON 09 JUL 2002

FILE 'REGISTRY' ENTERED AT 14:17:37 ON 09 JUL 2002